1

Fig 1A

3

5

1

θ

Fig 1C

Force

θ

Fig. 1B

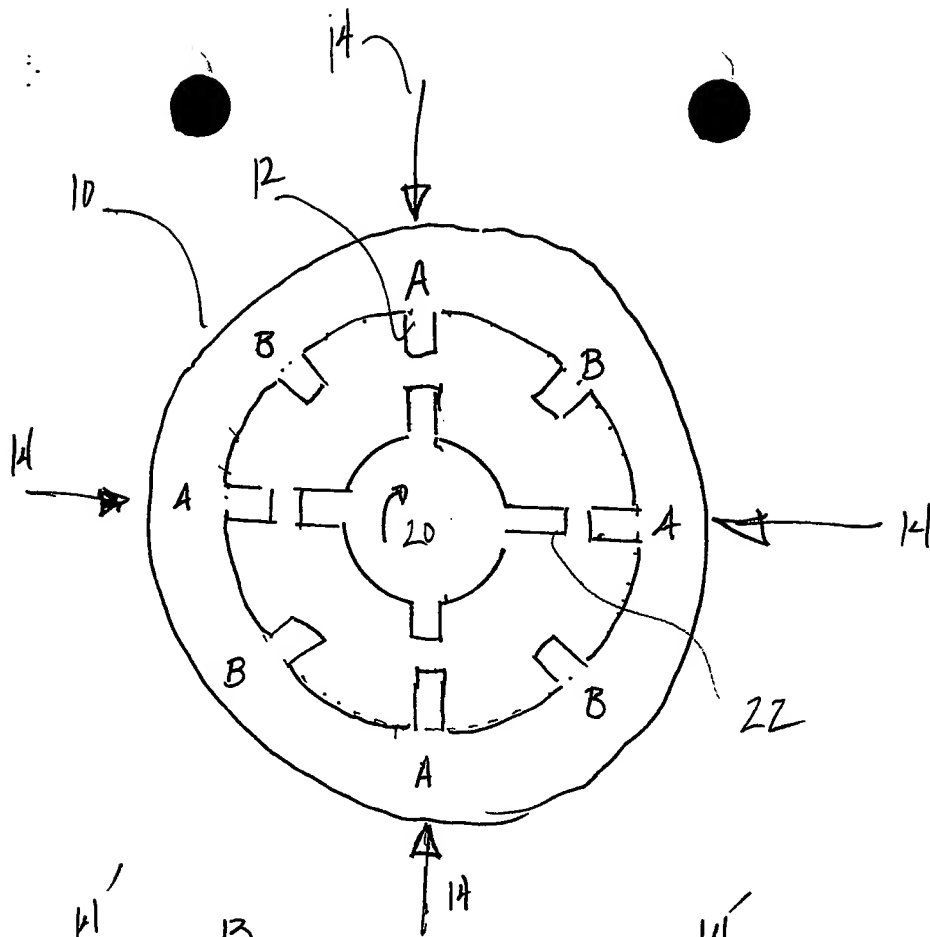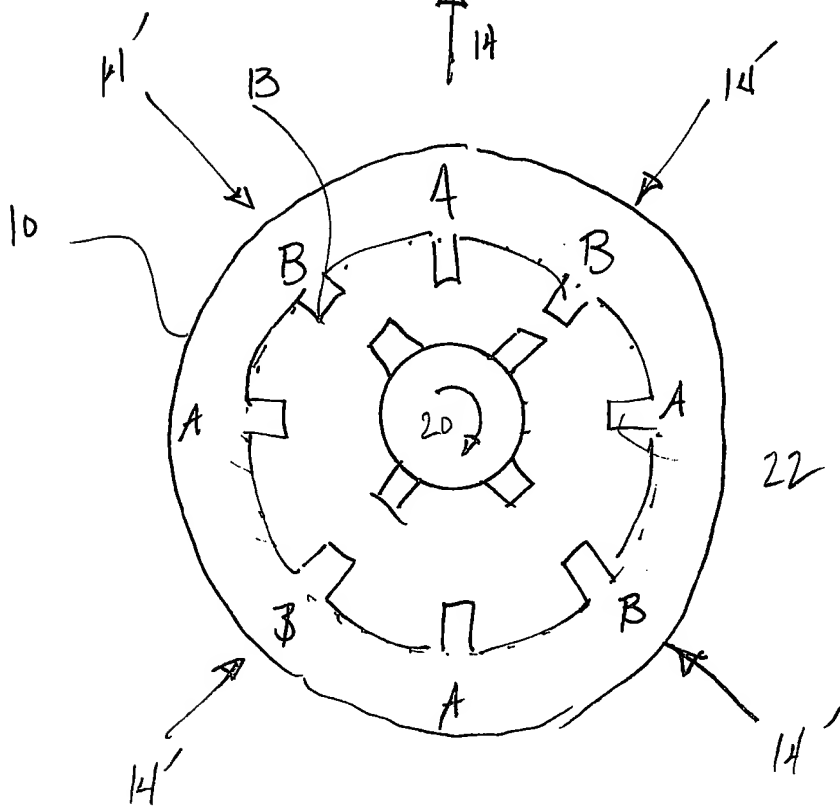I

θ

(Prior Art)

Fig 2A

Fig. 2B

Fig 3A

Fig 3B

(Prior Art)

Fig. 4A

4B

I

4B A & C
L
$\frac{dL}{d\theta} = 0$

B & D
L
$+\frac{dL}{d\theta}$

4D
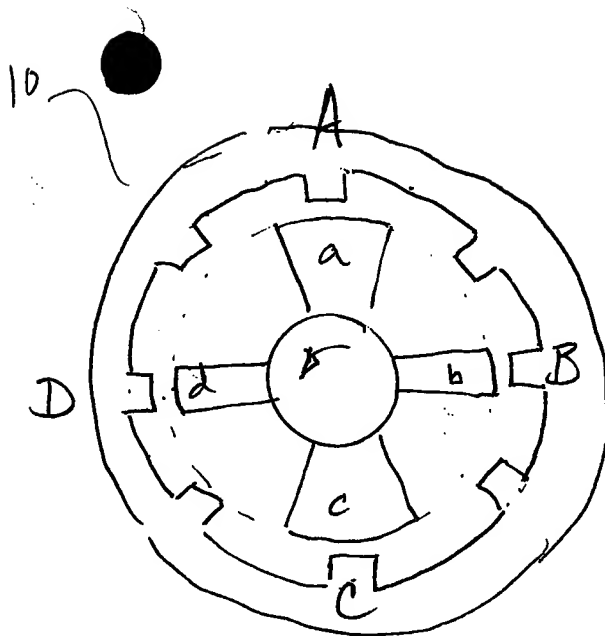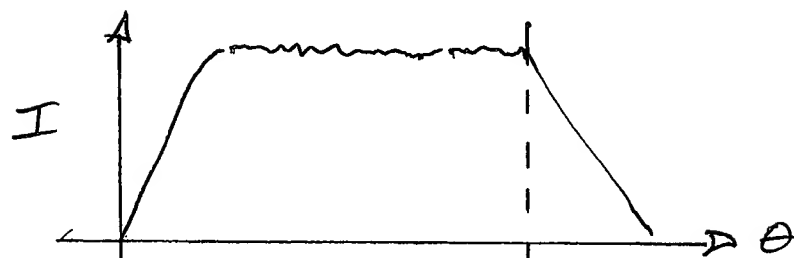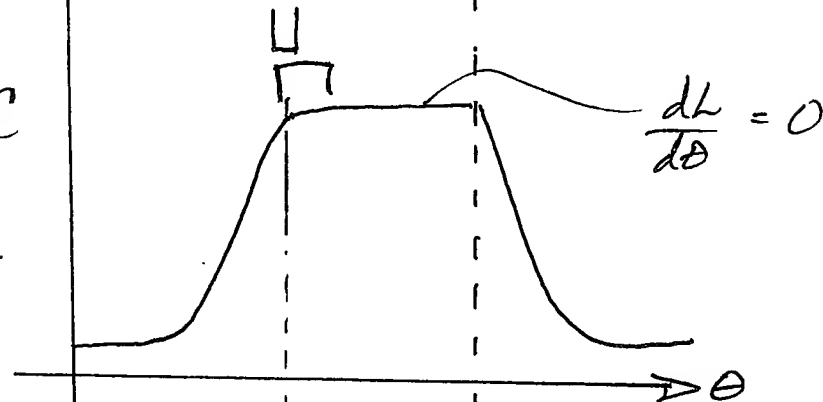
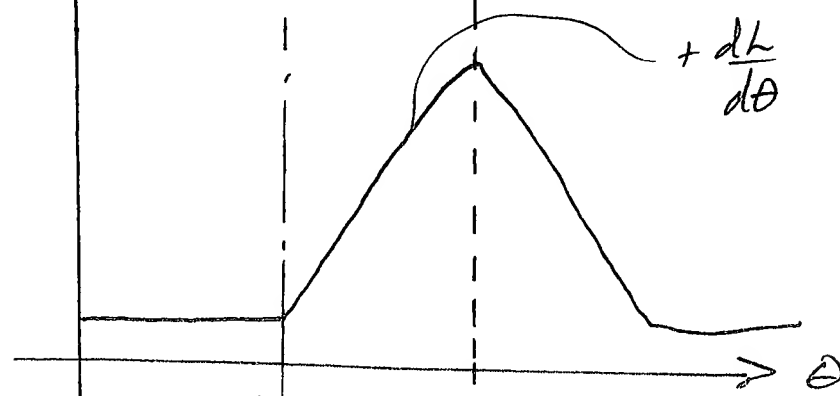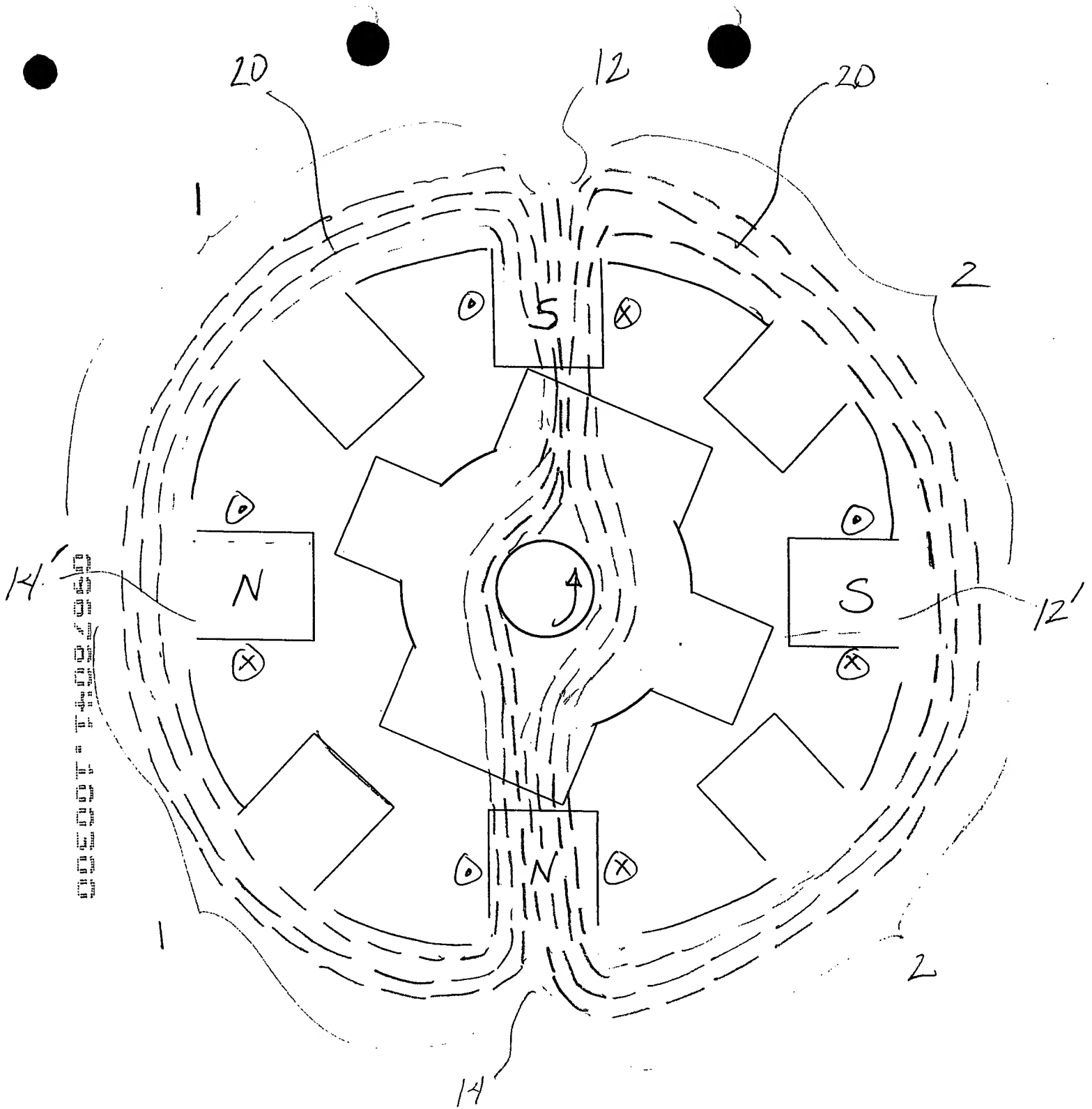(Prior Art)

FIG. 4E
(Prior Art)
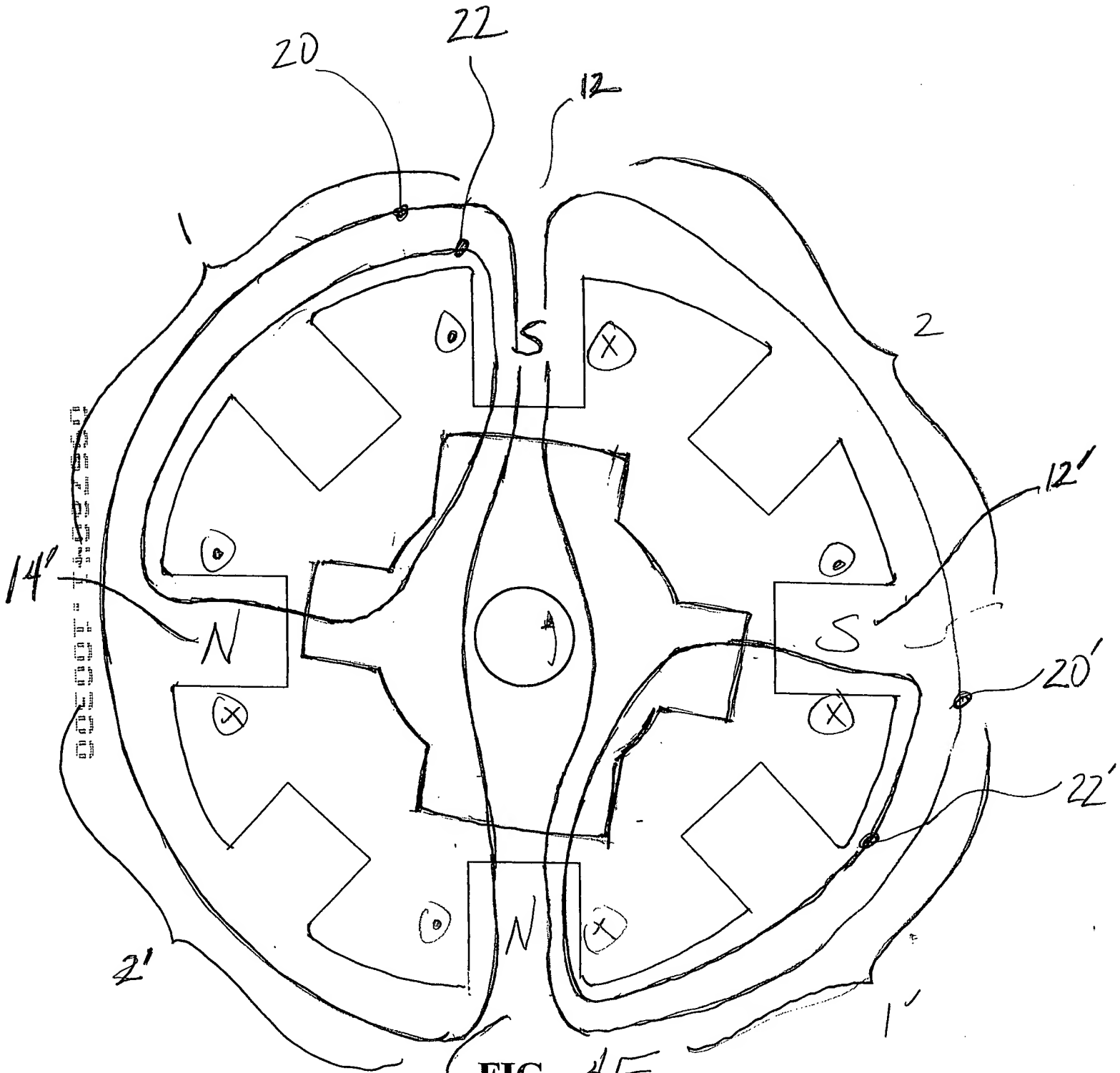
FIG. 4F

(Prior Art)

FIG. 4G

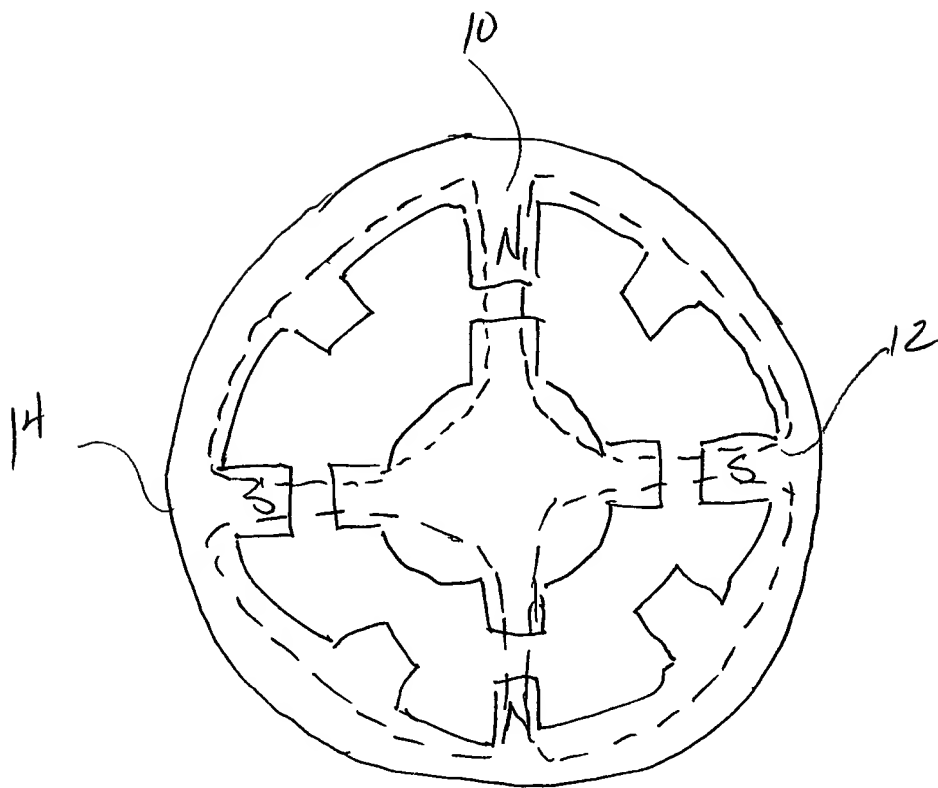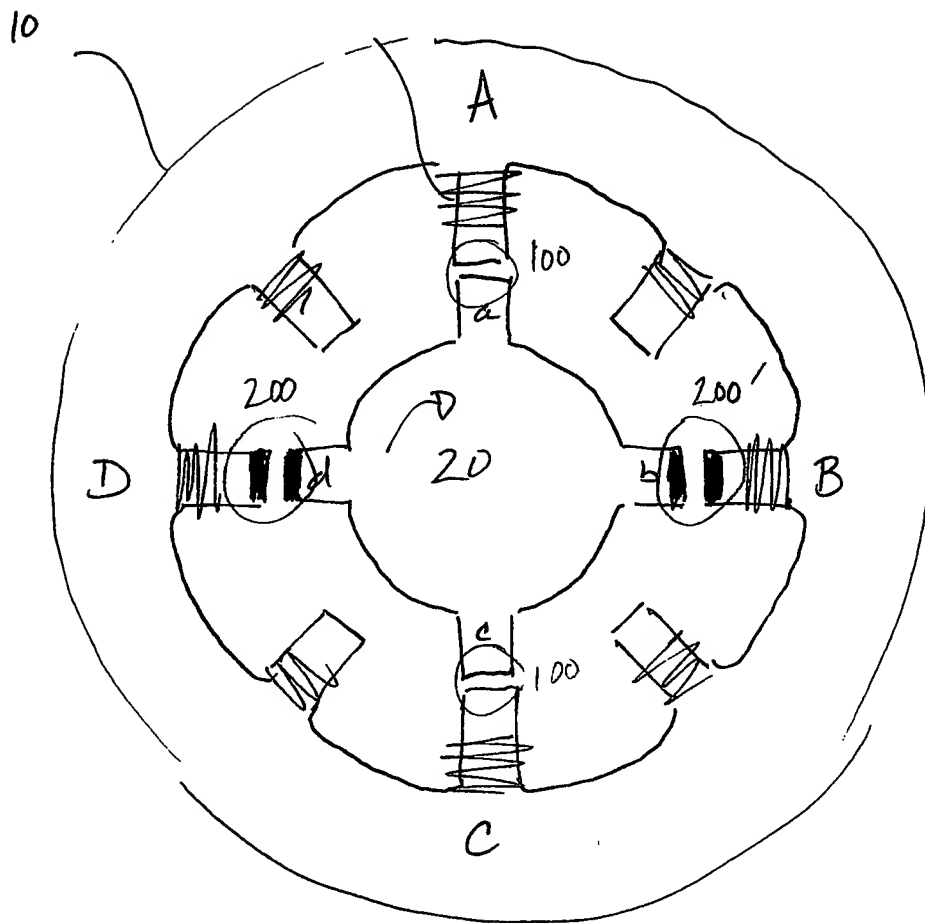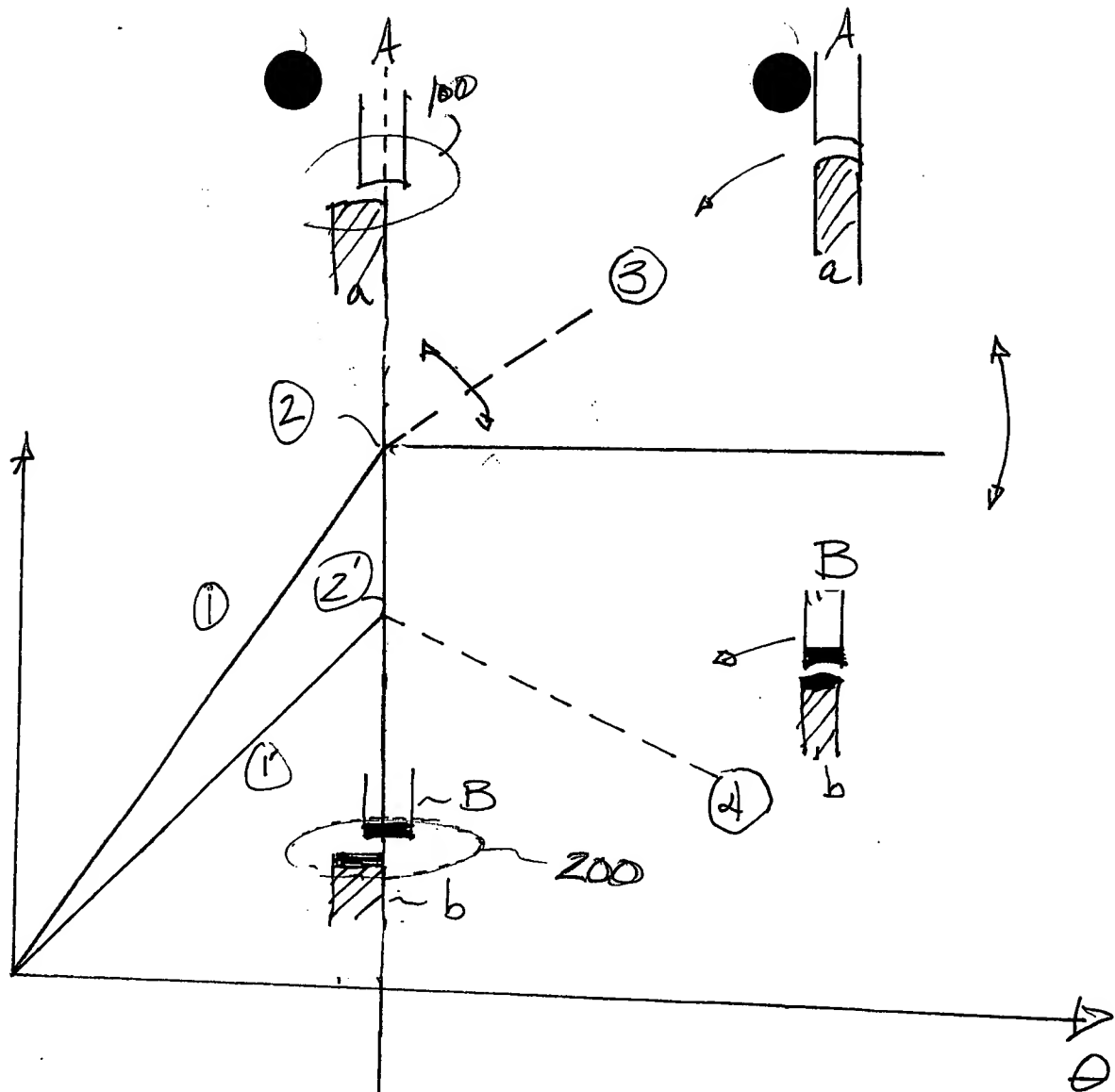(Prior Art)

10

A

100

a

200

200'

D

20

d

b

B

c

100

C

FIG. 5A

Fig 5C

Normal Force

Fig 5B
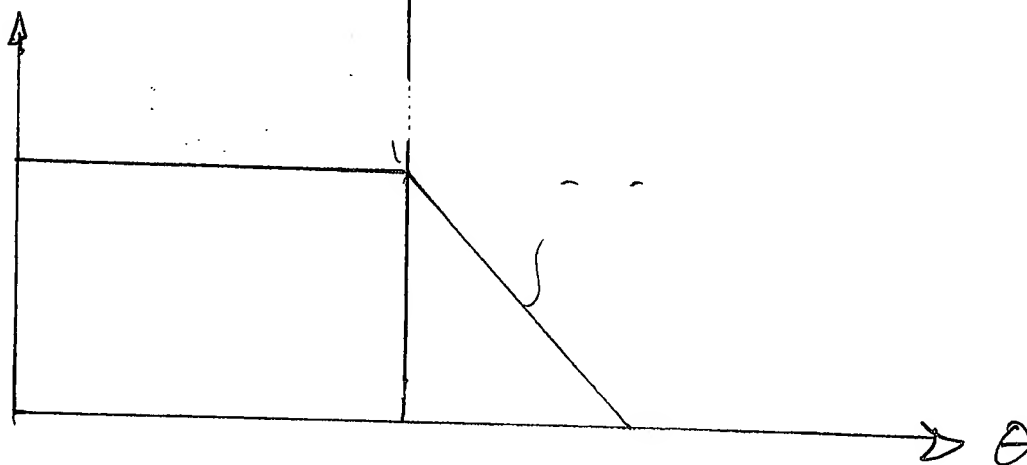
I

FIG 5 B&C

FIG 6A

t1   t2   t3   t4

t_1

t_2
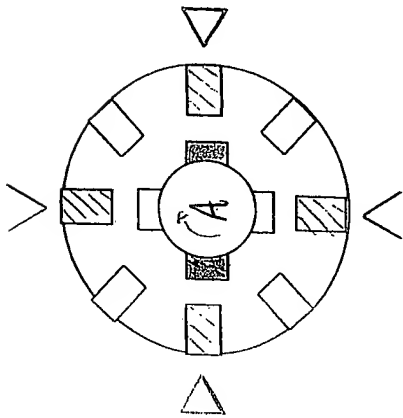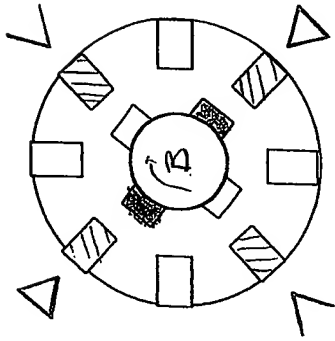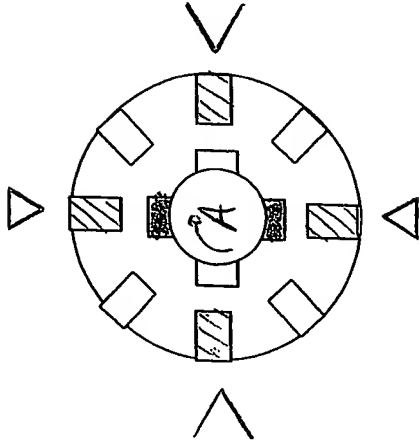
t_3

t_4

t_1

t_2

t_3

t_4

FIG 6B

Fig 6C

t1

t2

t3

t4

t1

t4

t5

t7 ---
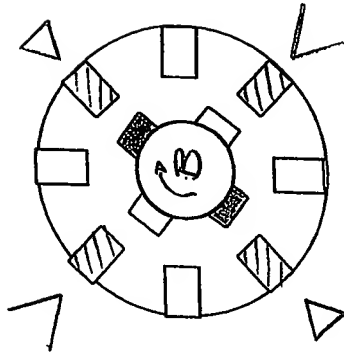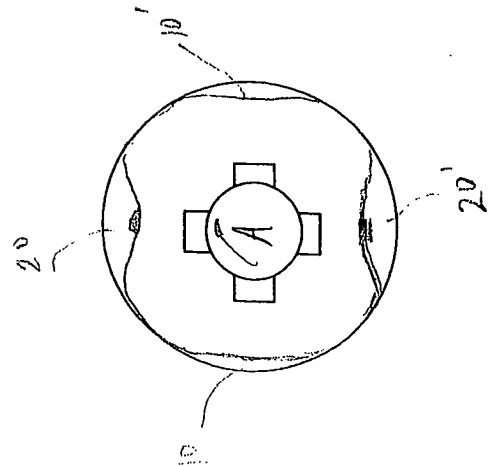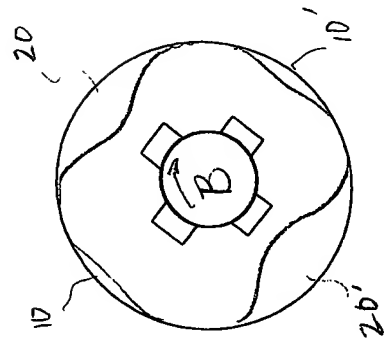
t1   t2   t3   t4

t1   t2   t3   t4
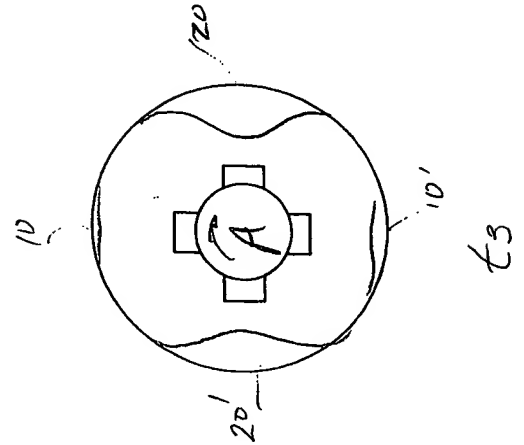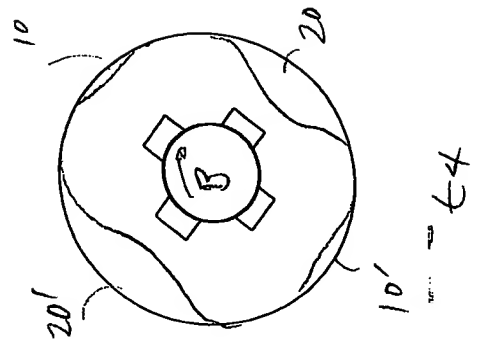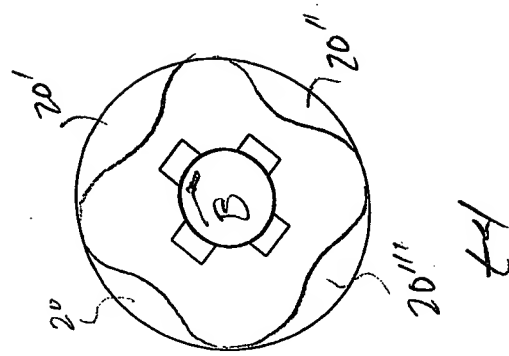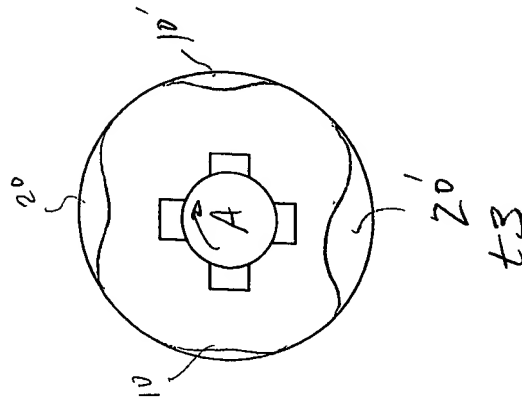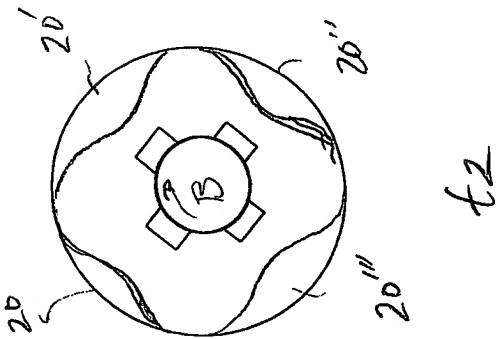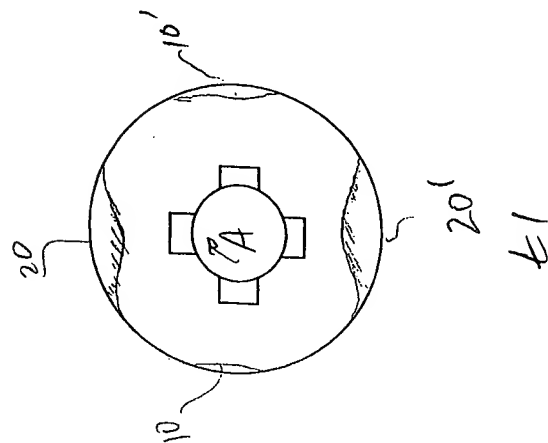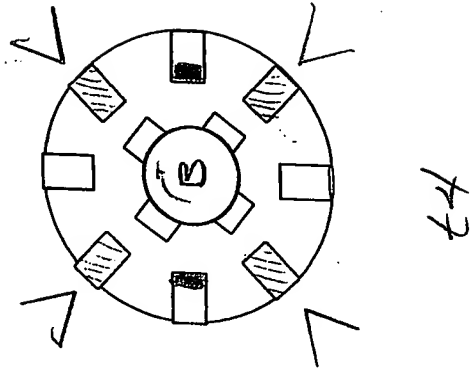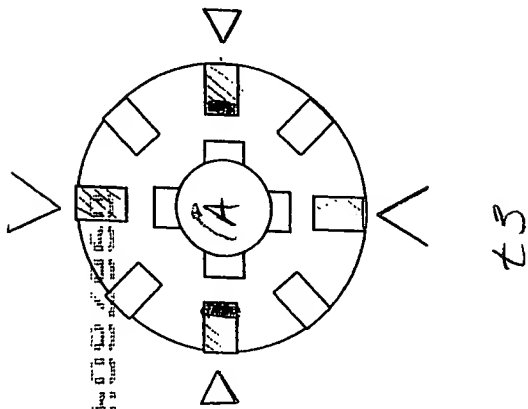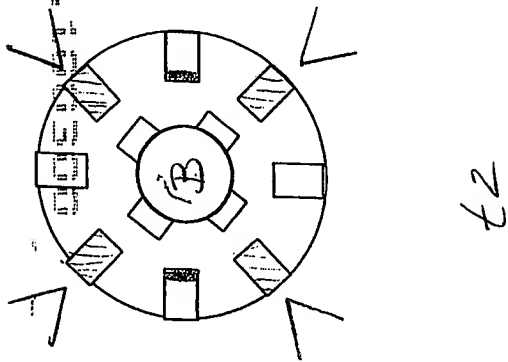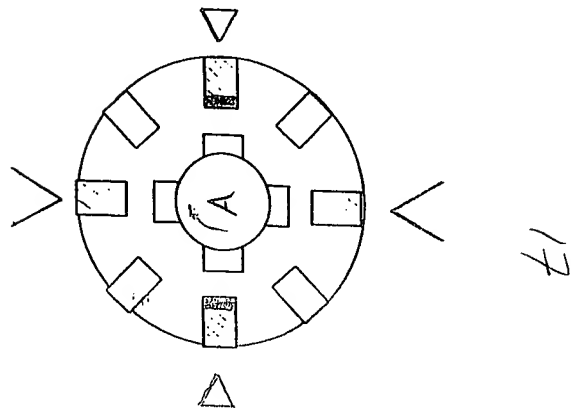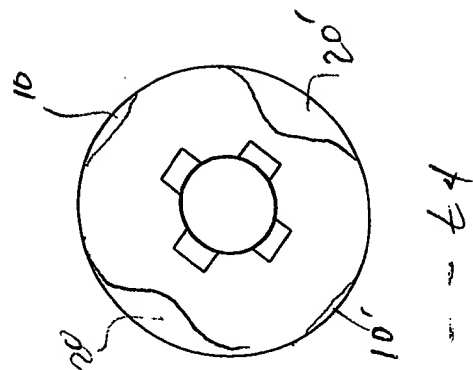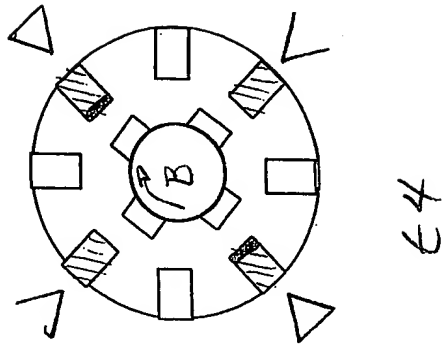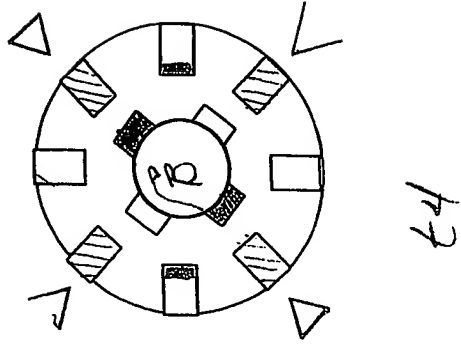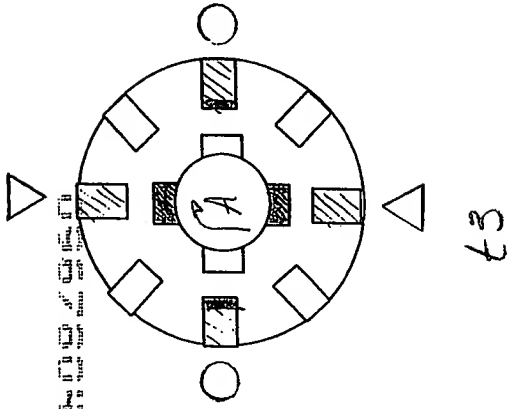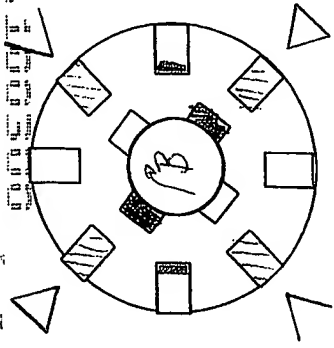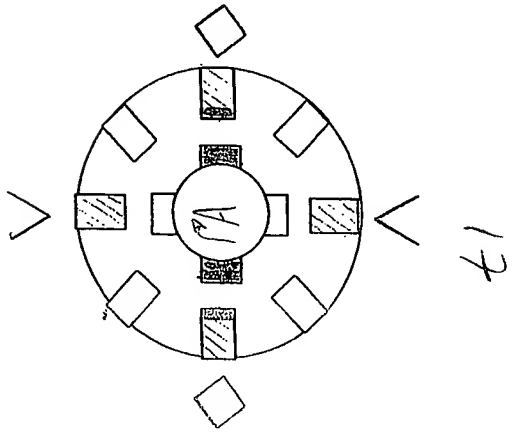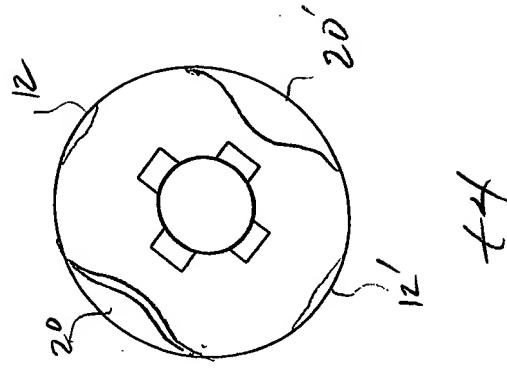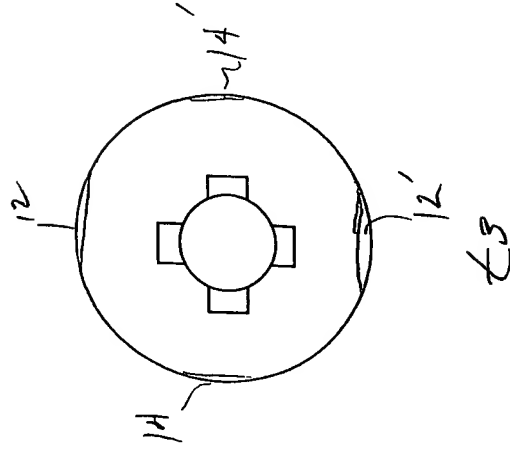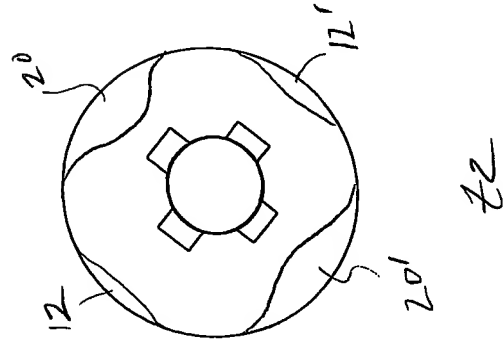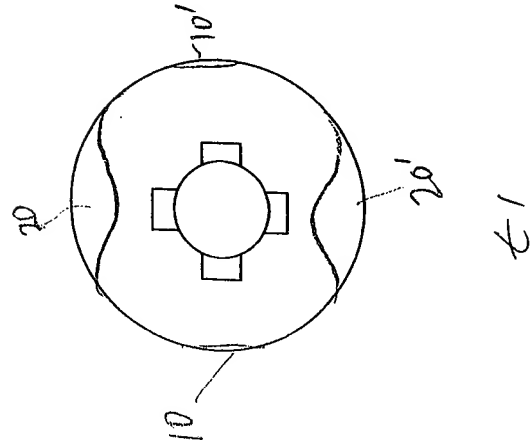
FIG 6D
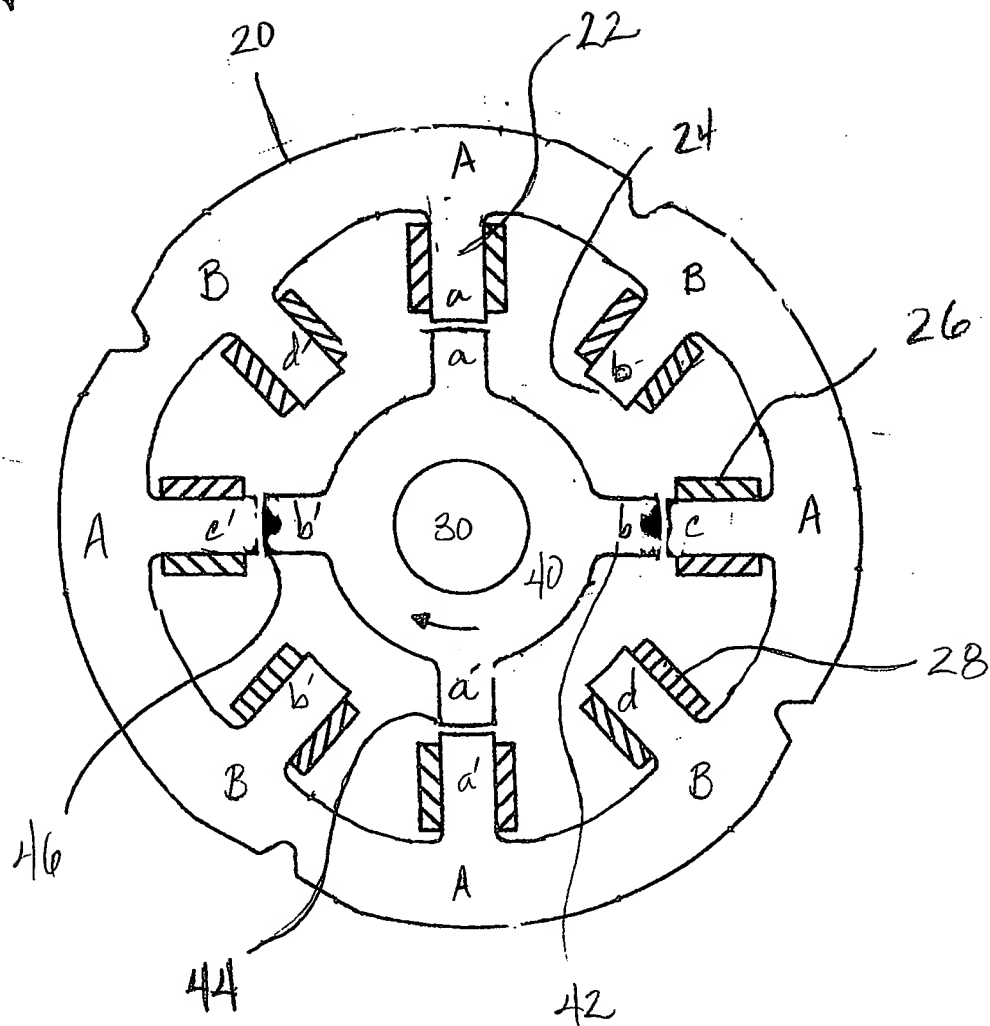
FIG 7A

Stator Poles
22a-a'

Normal Force

θ

Fig 7B

Stator Poles
22c-c'
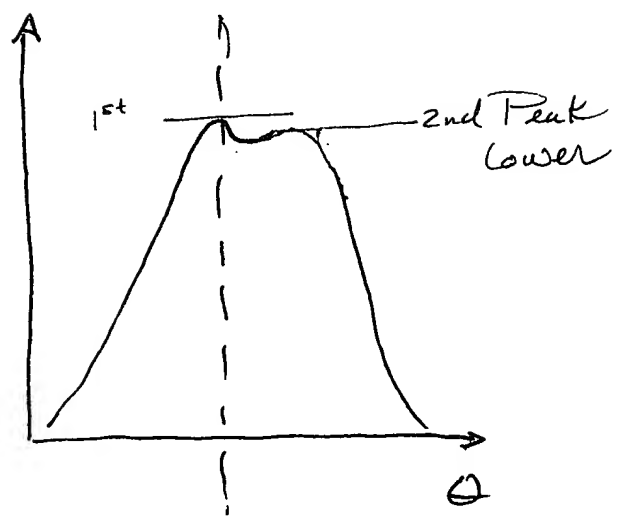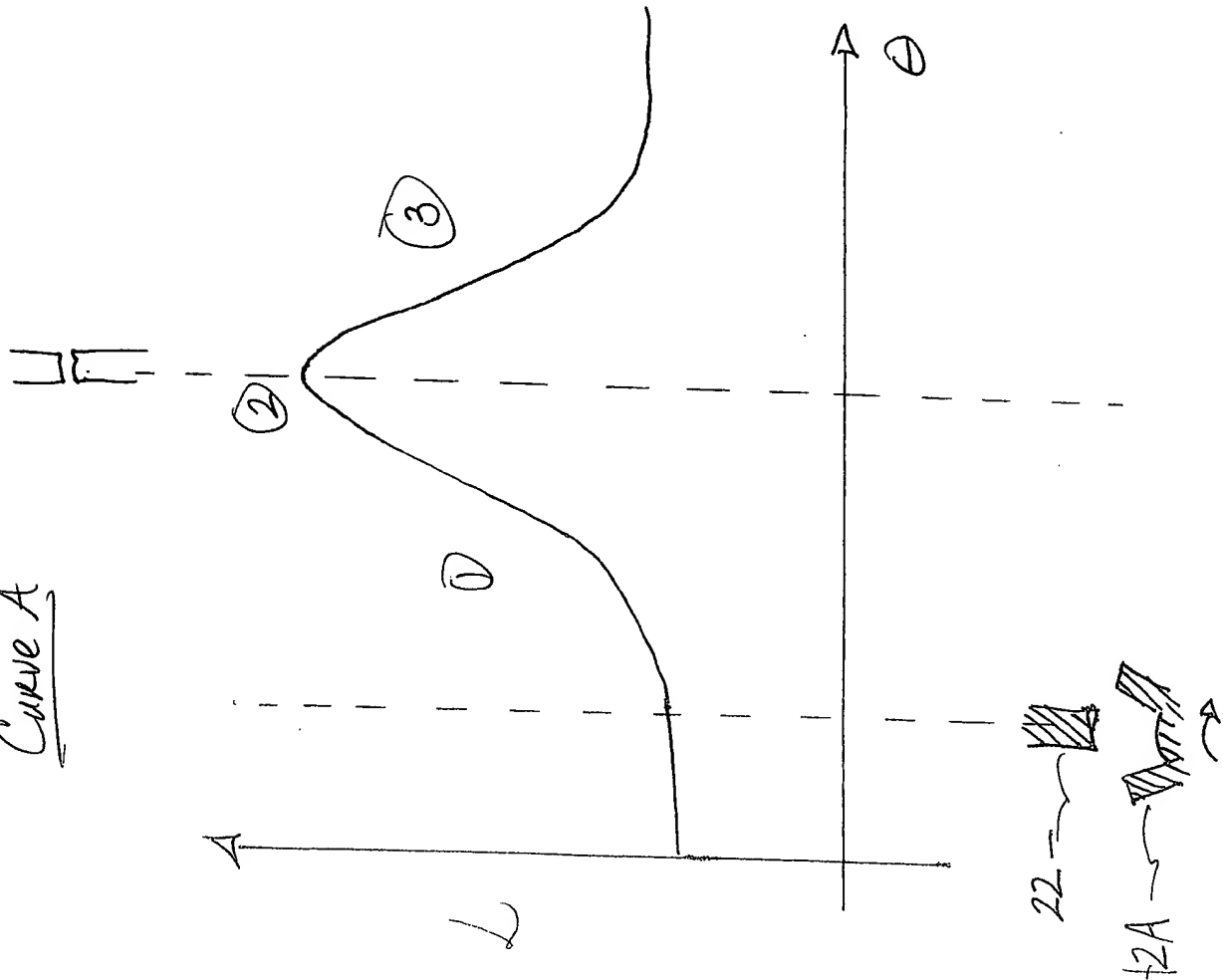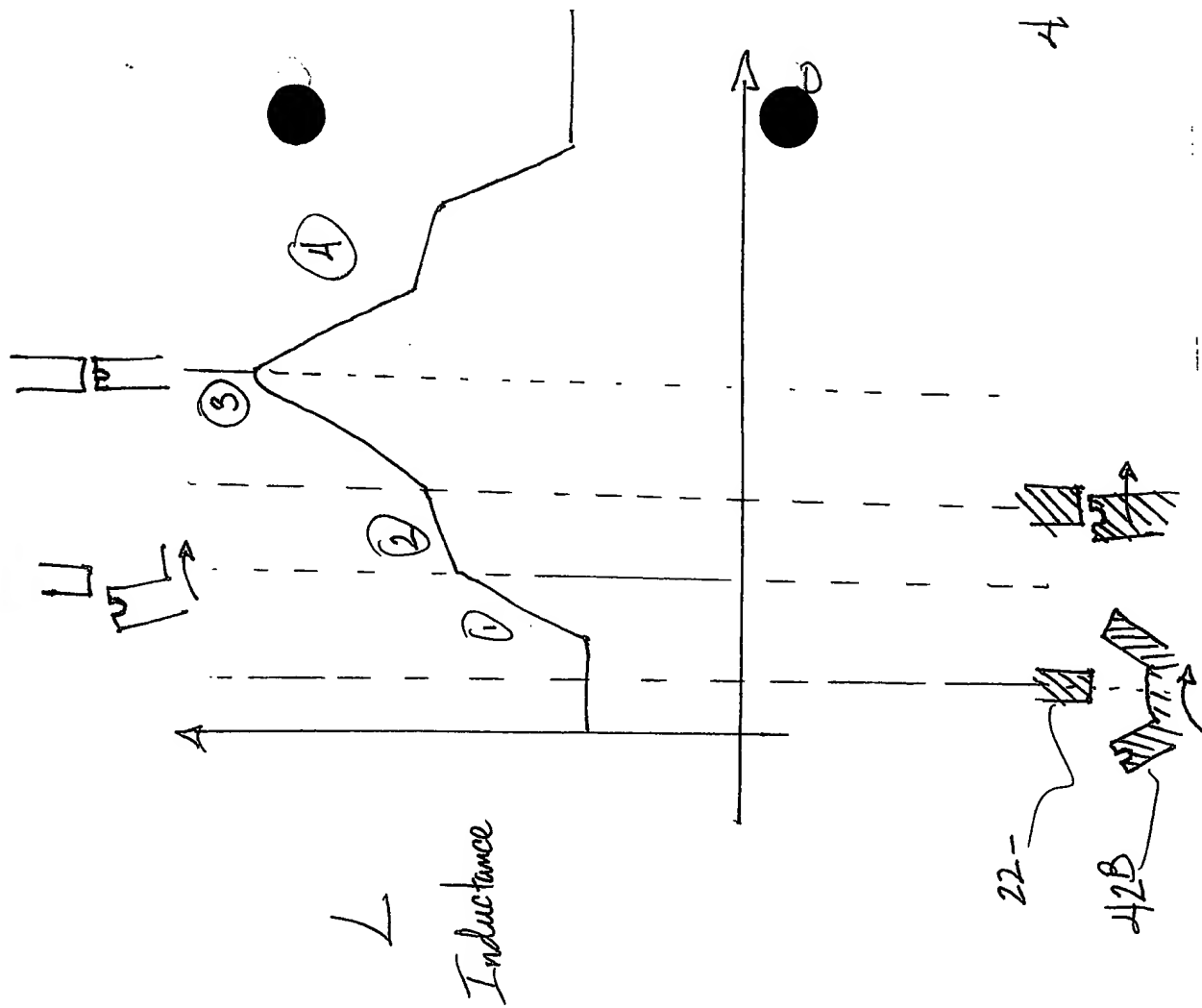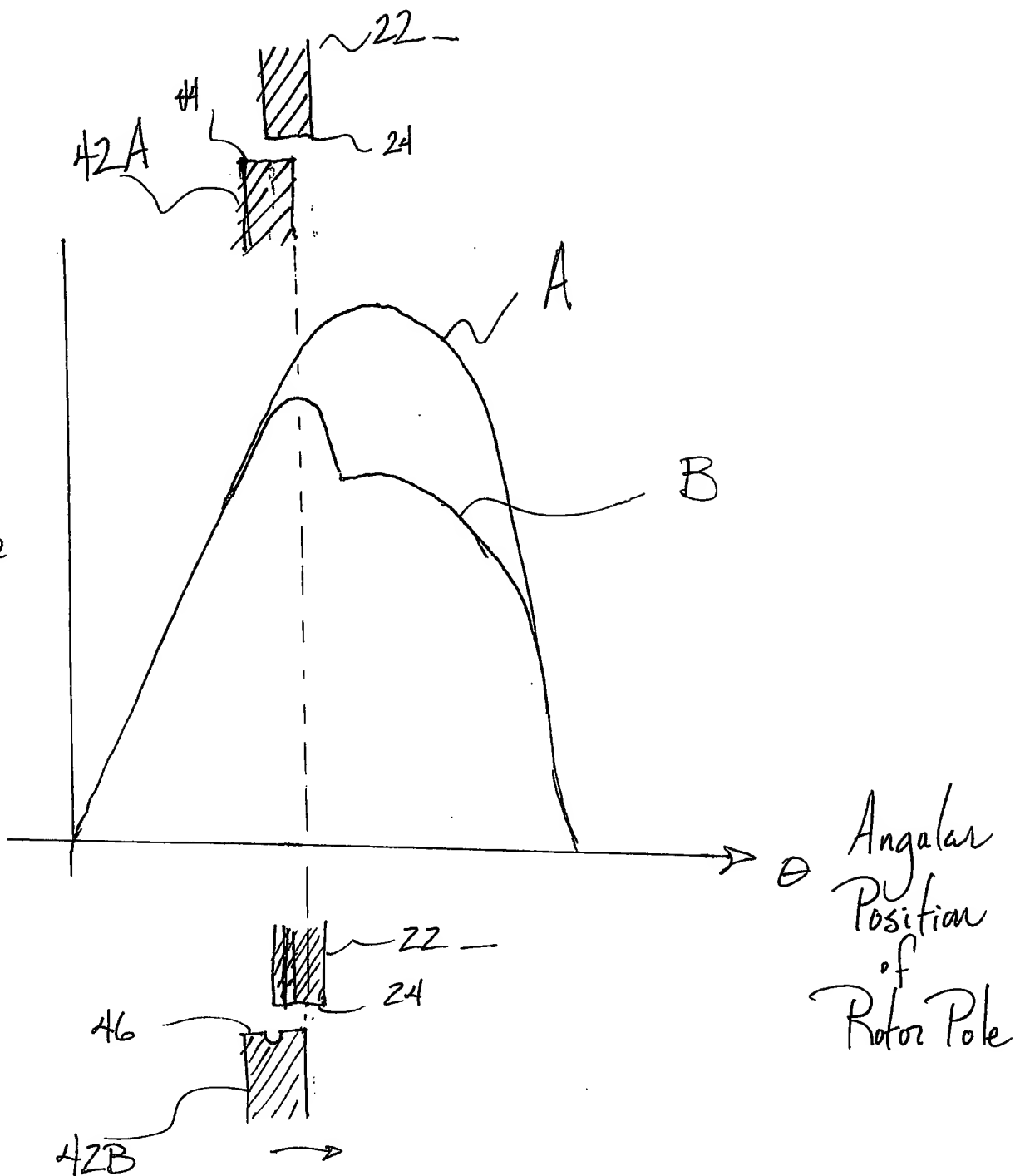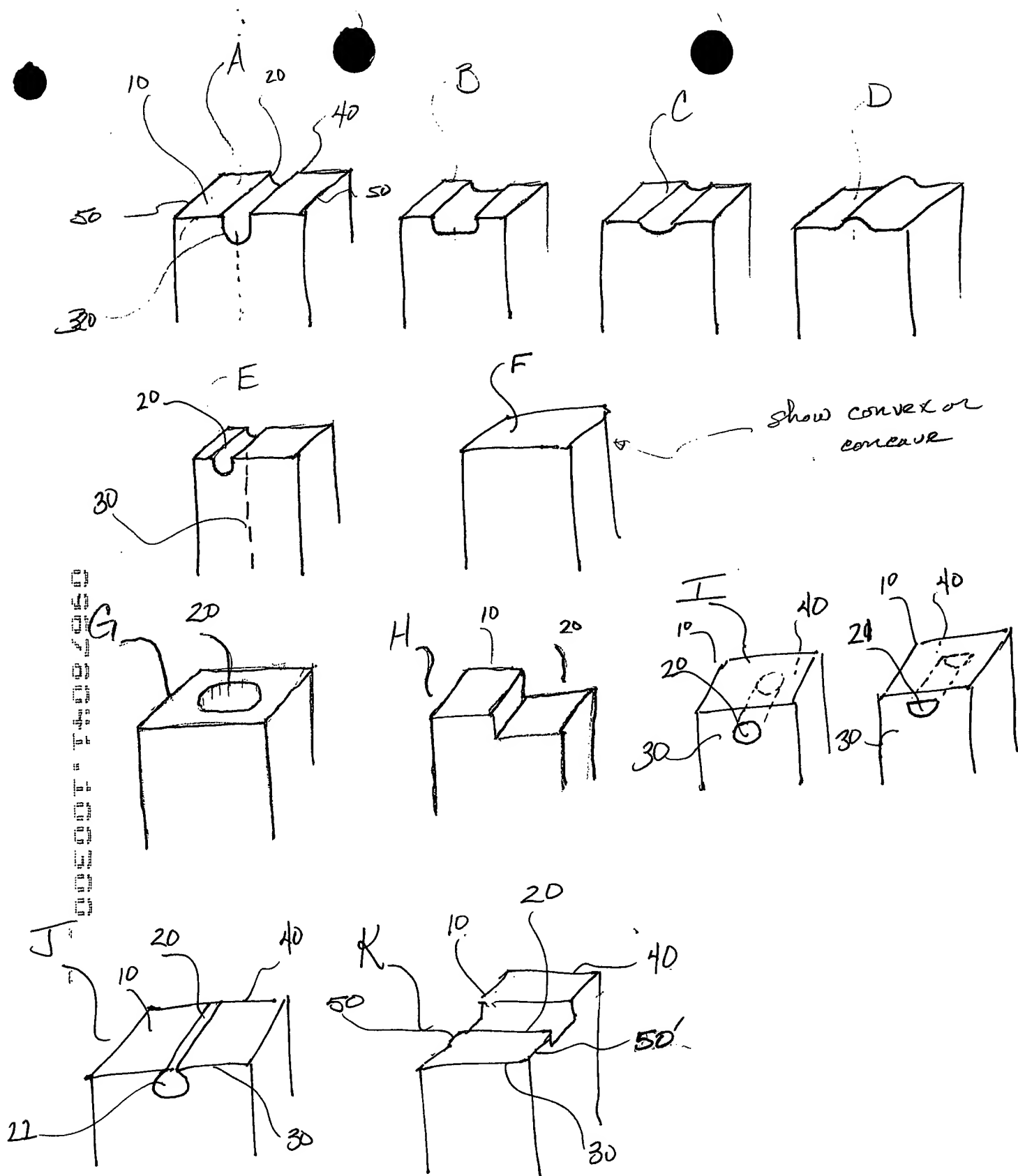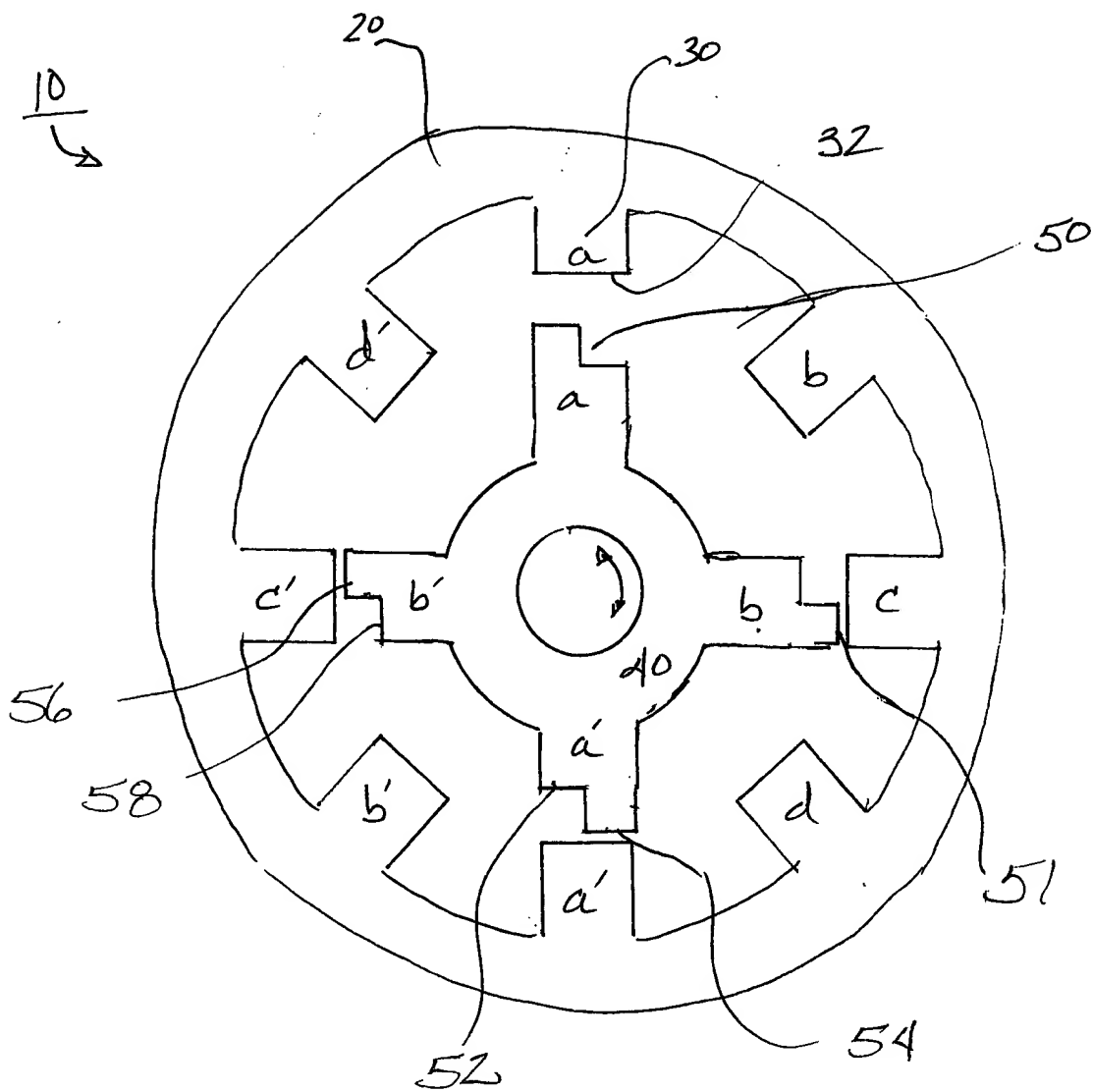
1st

2nd Peak Lower

θ

Fig 7C

FIG 8B

Curve B

Curve B

FL

FH

③

②

①

A

Inductance L

I

22—

42B

FIG 8A

Curve A

Curve A

FH

②

③

①

I

Inductance L

22—

42A

FIG 8C

A 10 20 40 50 50 30

B

C

D

E 20 30

F show convex or concave

G 20

H 10 20

I 10 10 20 30 40

10 40 20 30

J 10 20 40 22 30

K 10 20 40 50 50' 30

FIG 9

FIG 9L

10

20

30

FIG 10

Fig. II A

Fig. II B

10

22   A   20

B   B

A

10   12   A   14   20

B   B

A

$\underline{10}$

12

A

A

20

11

14

B

13

13'

B

14'

A

12'

FIG 11C

FIG. 11D

FIG. 12A

Normal Force

A

B

θ

FIG. 12B

10

12

16

18

14

14'

18

16

12'

Fig. 12C

FIG. 13

FIG. _14

FIG. 15

FIG. 16

10

20

30

36

40

44

42

FIG. 17

FIG. 18

FIG. 19

FIG 20

W

⅓ W

20   24   22

d'

c'   a

24

b'   b

a'   c

22

d

24

FIG 21A

10

10

22

20

22

a

d×

b

24

c'

c

b'

d

24

a'

FIG 21B

W

2/3W

1/5W

22
20
22
26
26

a
c'
c'
c
b
b'
d
a'

FIG. 21C

10
/6

20
22
22

a
d'
b
c'
c
28
b'
d
a'
28

FIG. 21D

10

20   26

a

d'   b

c'   c

b'   d

a'

FIG. 21E

Fig. 21F

10

20' 22
20 22
30
40
a
b
b'
a'
a'
30
b' b 40
a'

FIG. 21G

$\dfrac{10}{4}$

20
22
20
22
a
b
b
32
40
a
32
a'
a'
b'
b

Fig. 21H

10
↗

20 24

a

d'   b

c'   c

b'   d

a'

FIG. 21I

10

20   22

20

22

a

b'

b

30

32

a

a

30

b'

b

32

a'

Fig. 21J

FIG. 21K

10/18

10/A

FIG. 21b

FIG. 22A

10

20

f' a b

e 22 24 c

22

d' 24 d

c' 22 e

b' 24 f

a'

FIG. 22B

10/6

20

f' a b

e 24 c

d' d

c' e

b' f
d'

Fig 22C

FIG. 23A

Legend
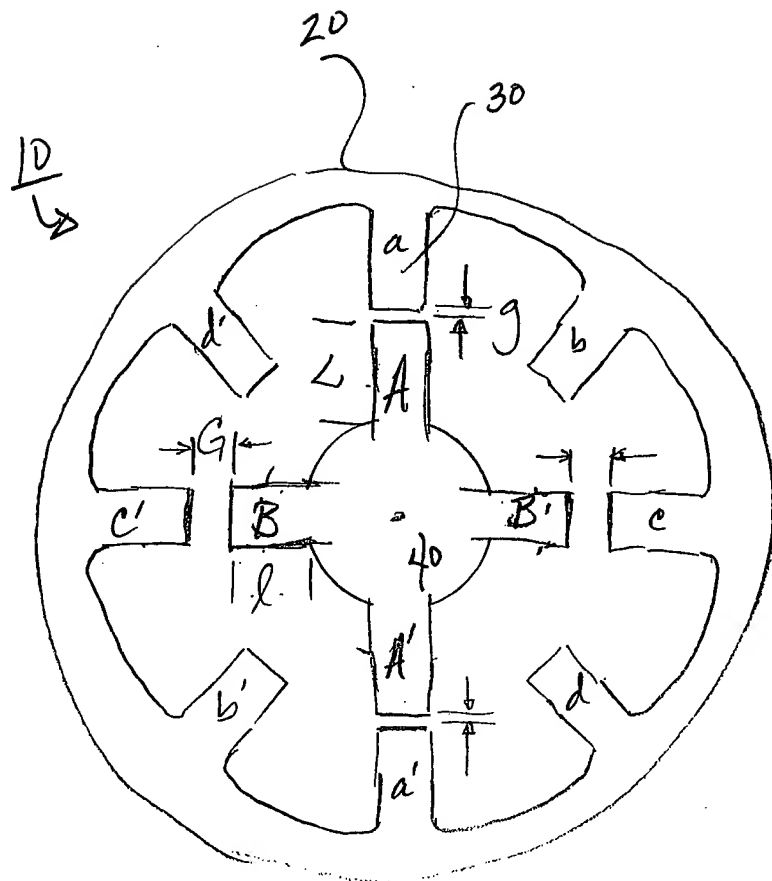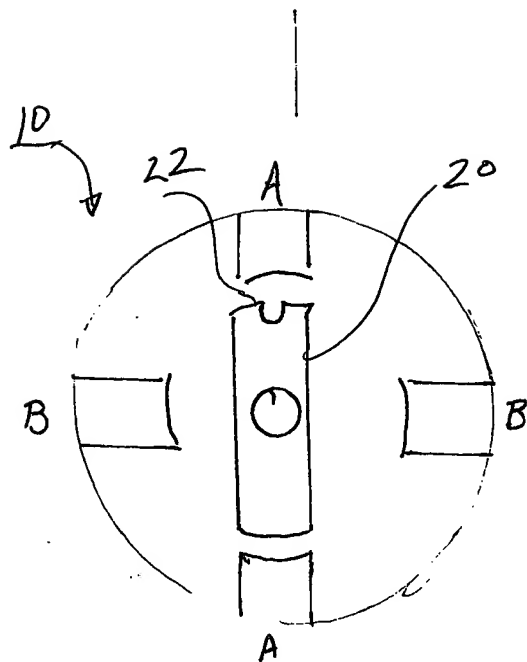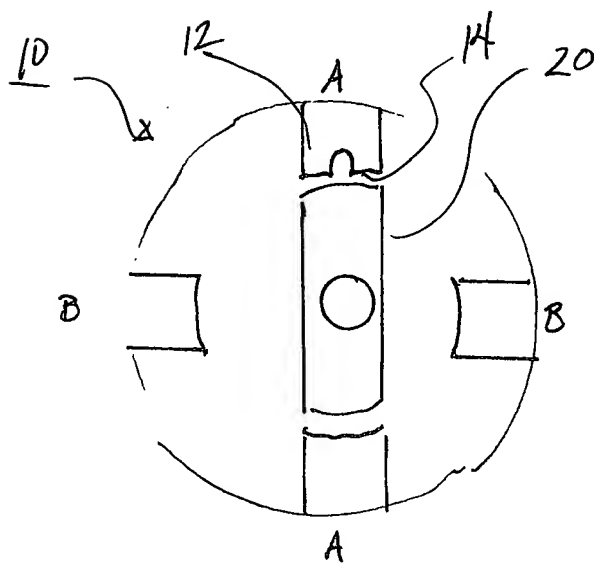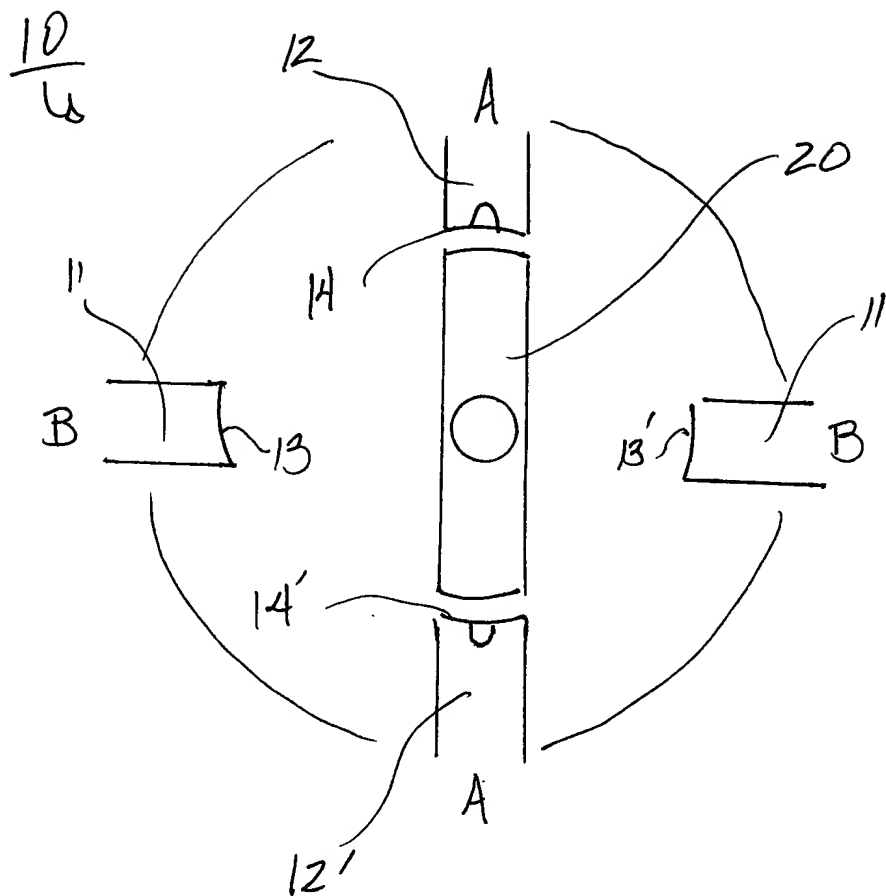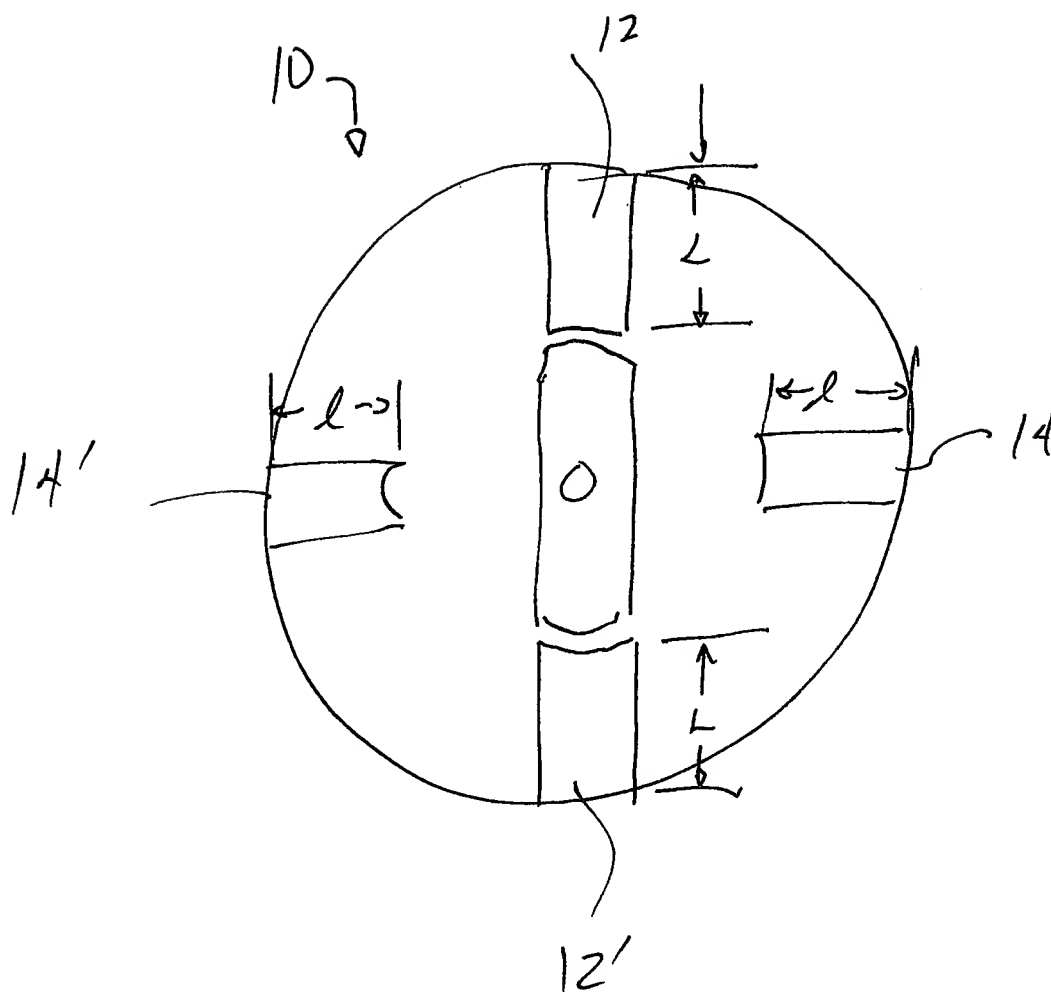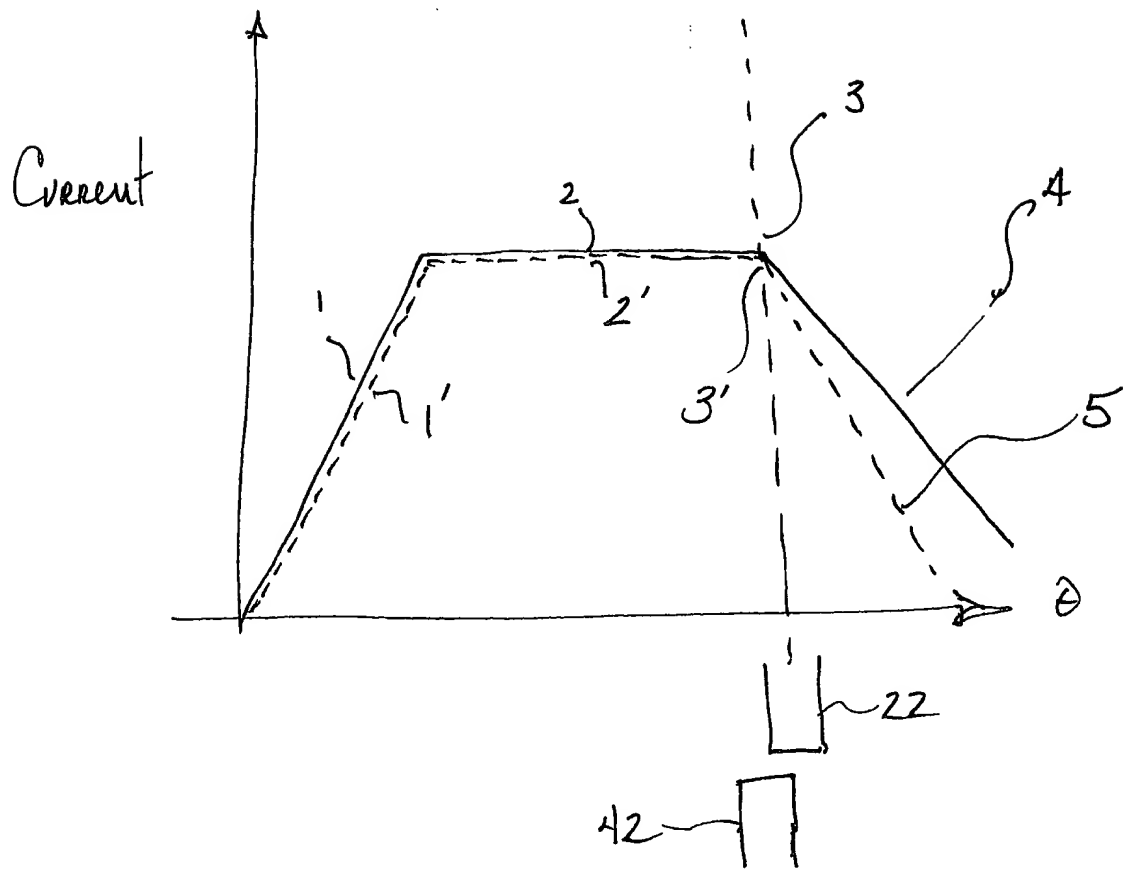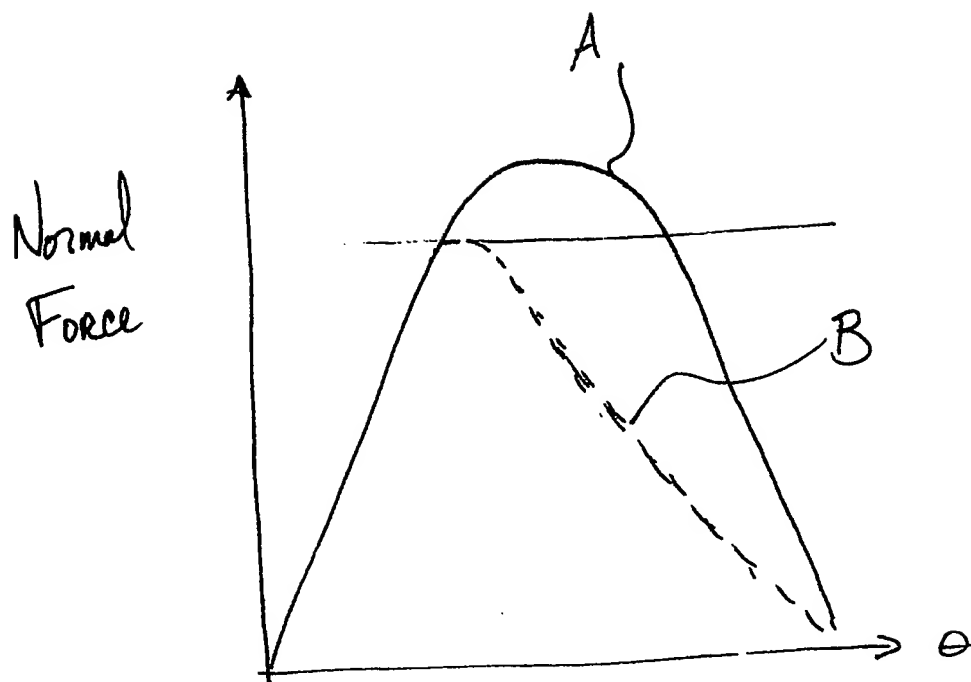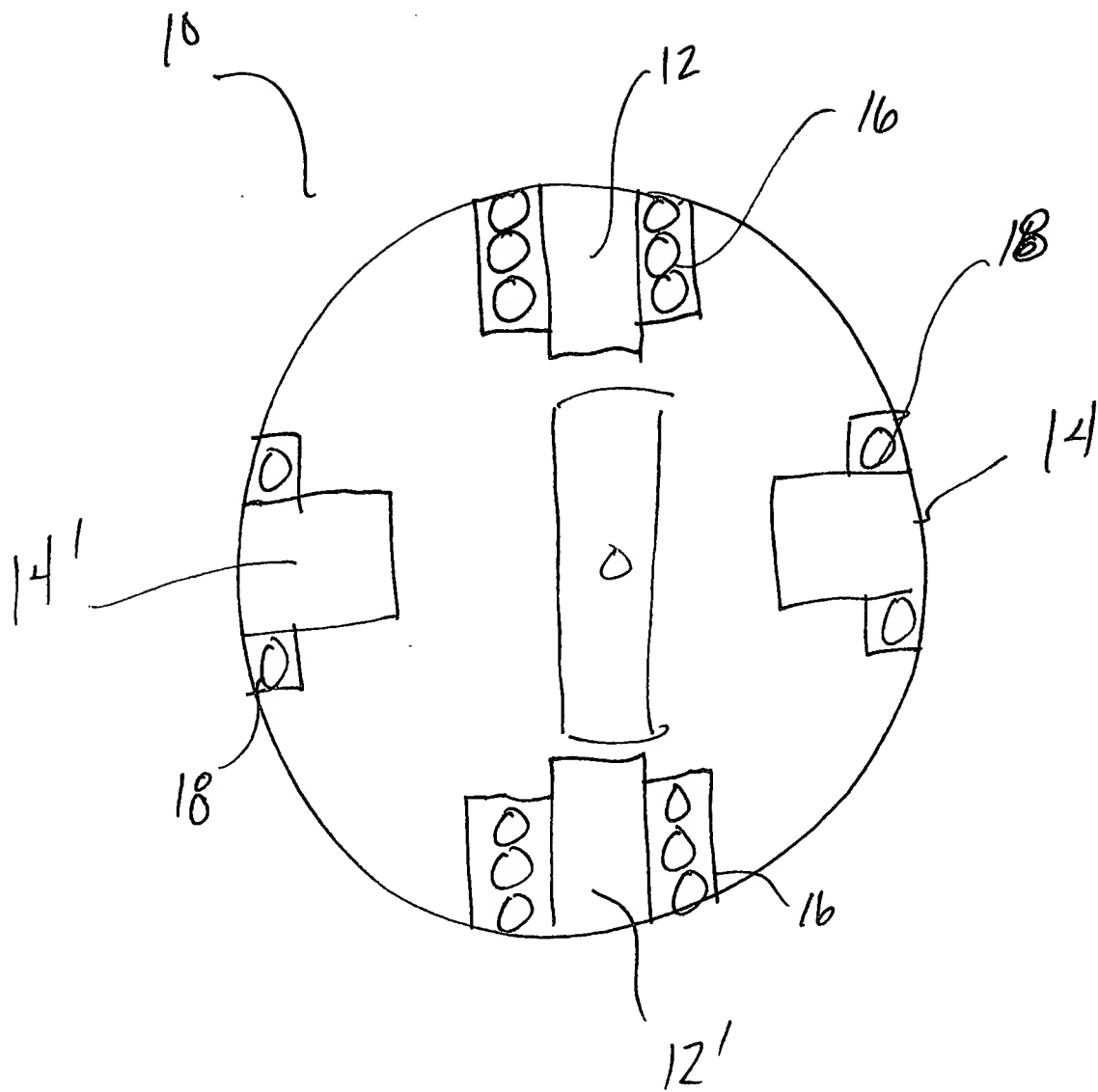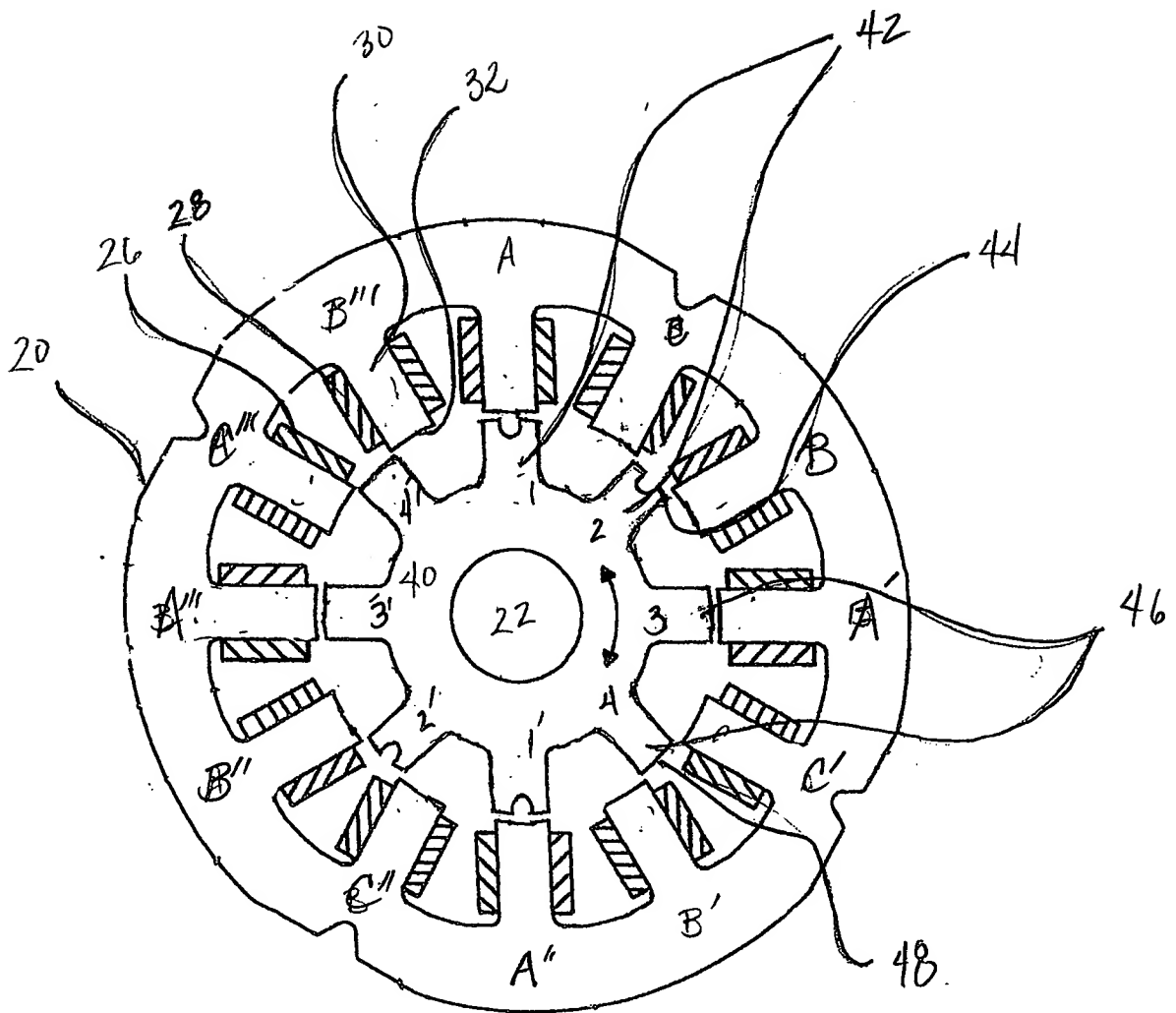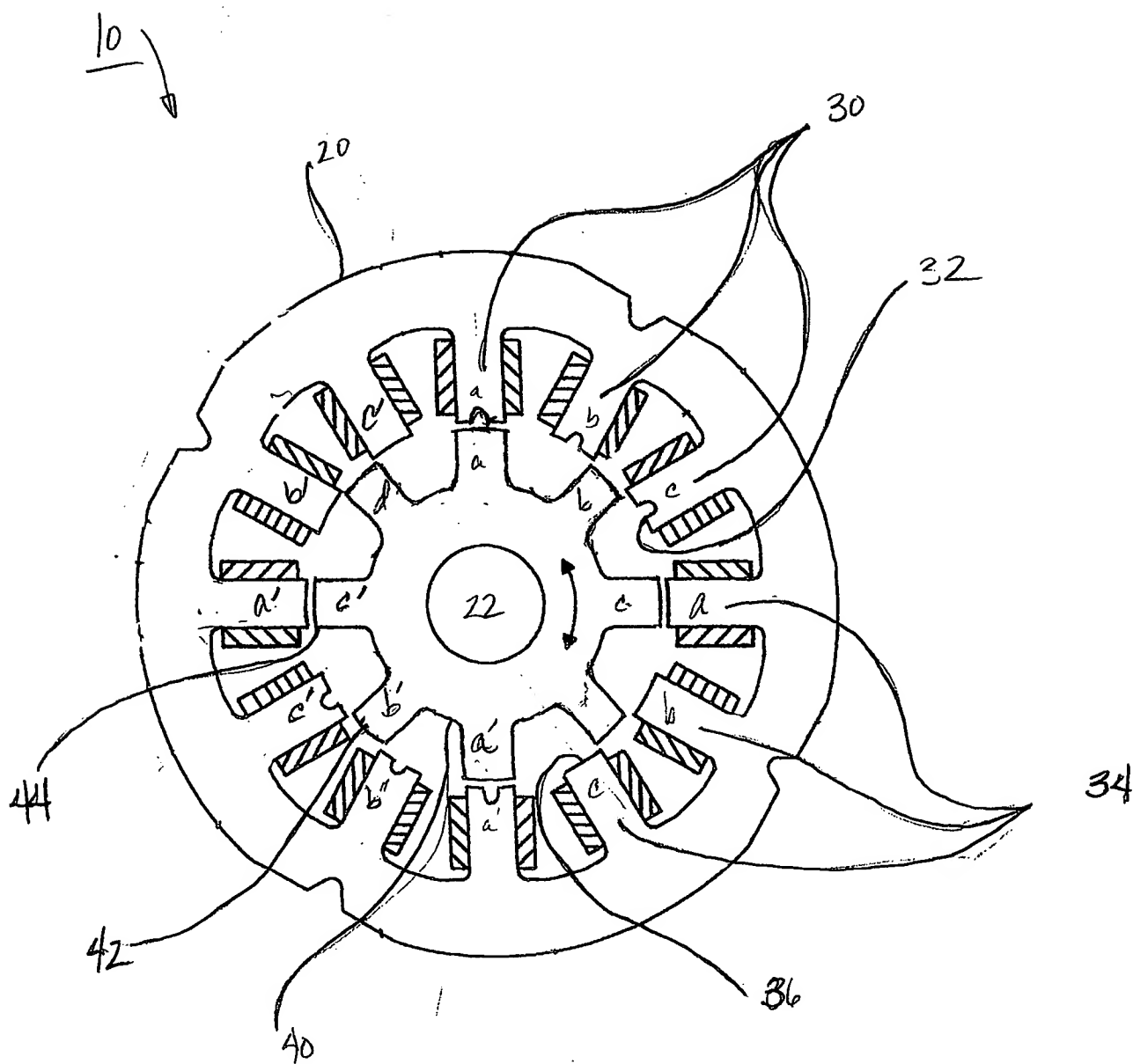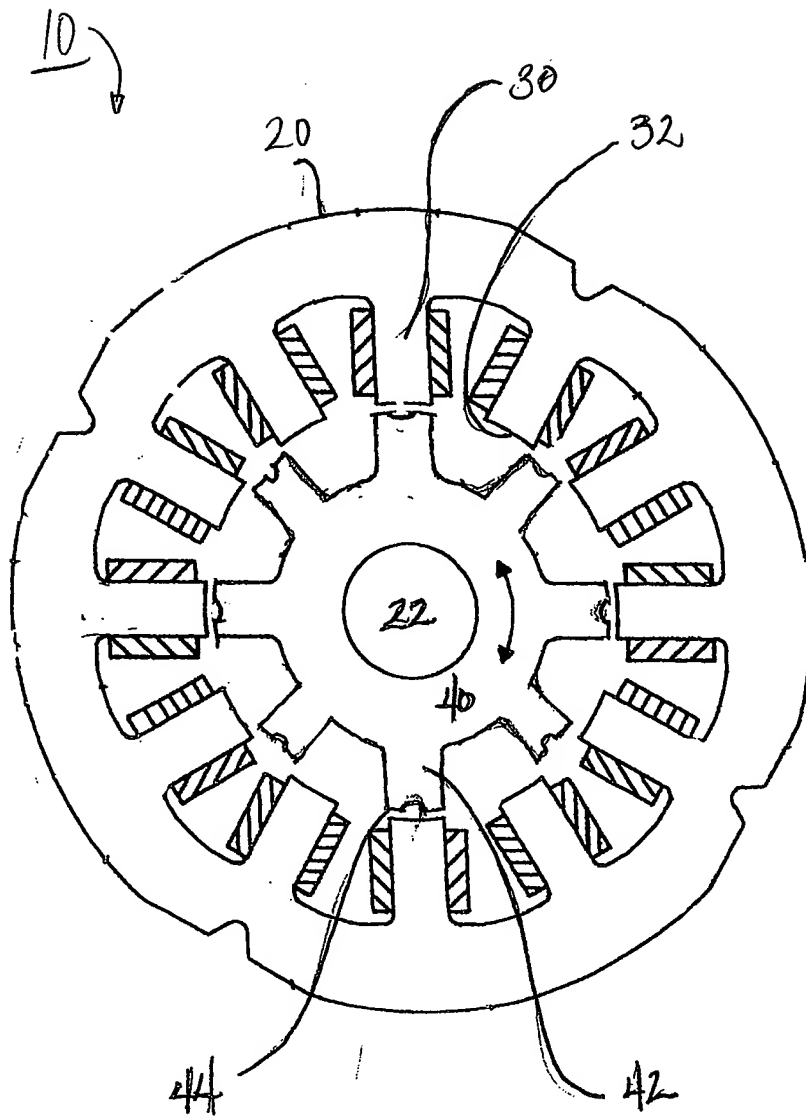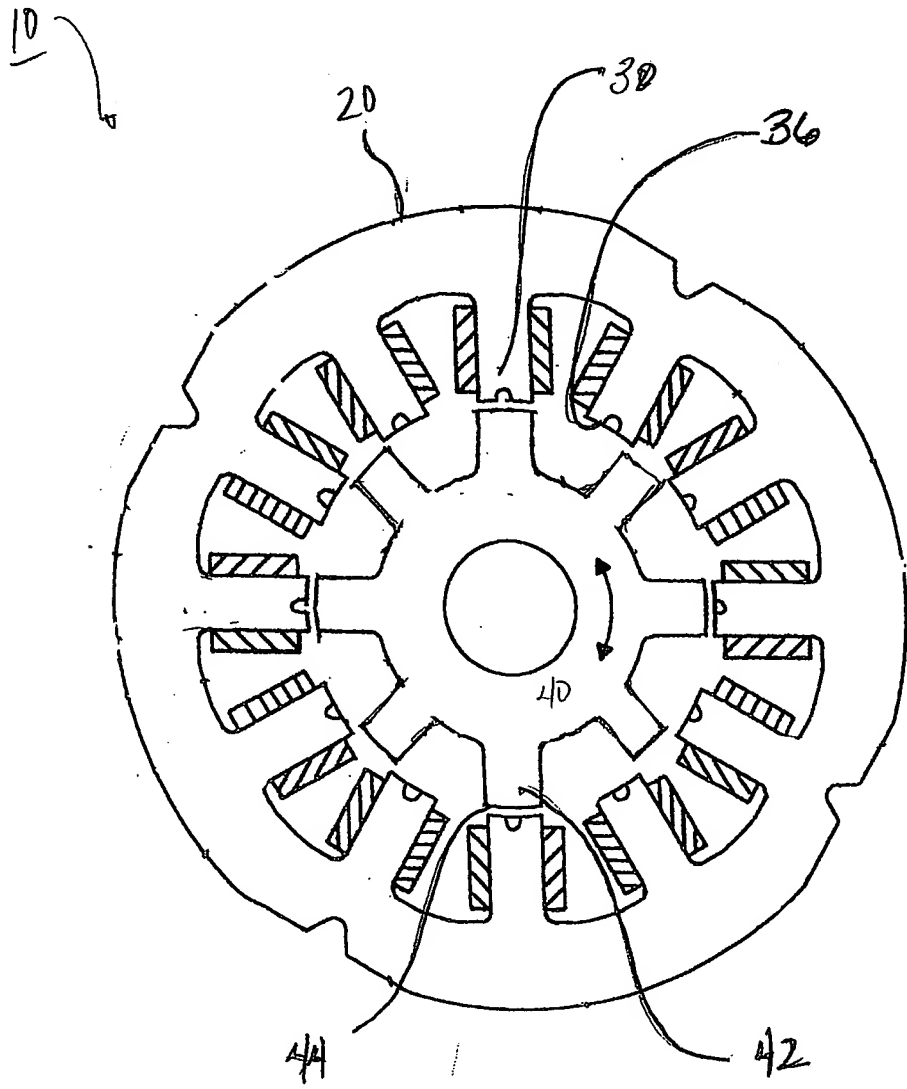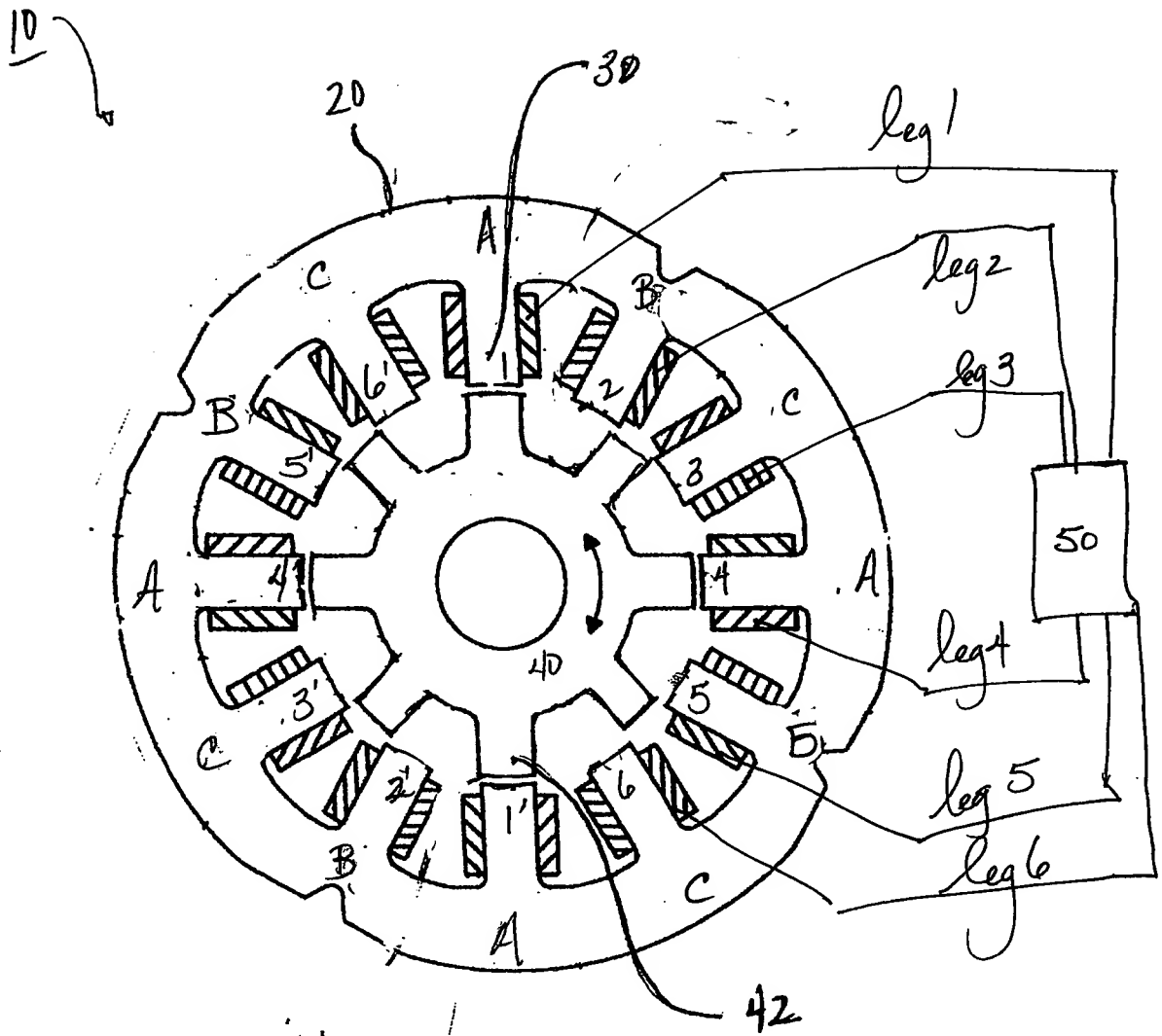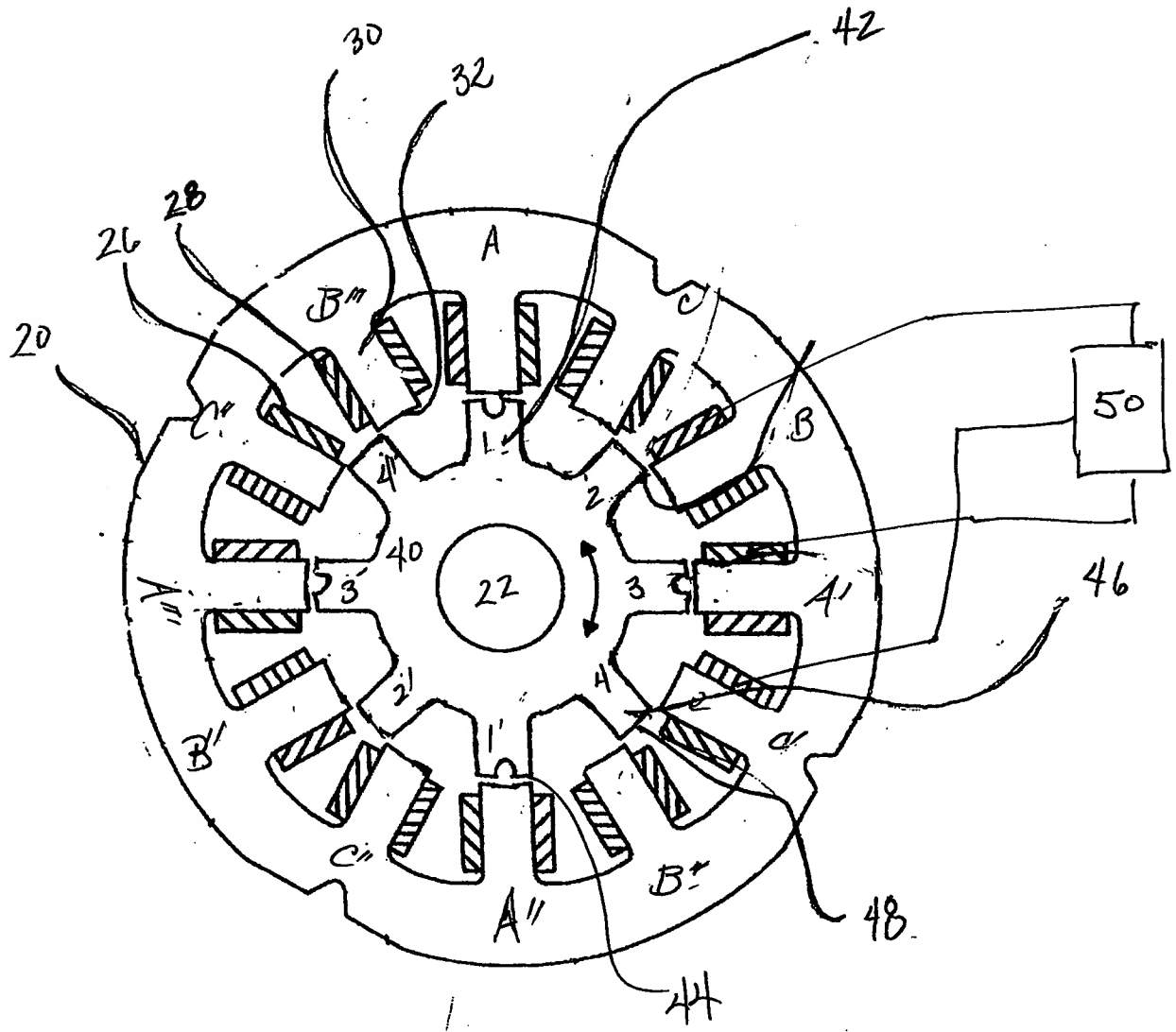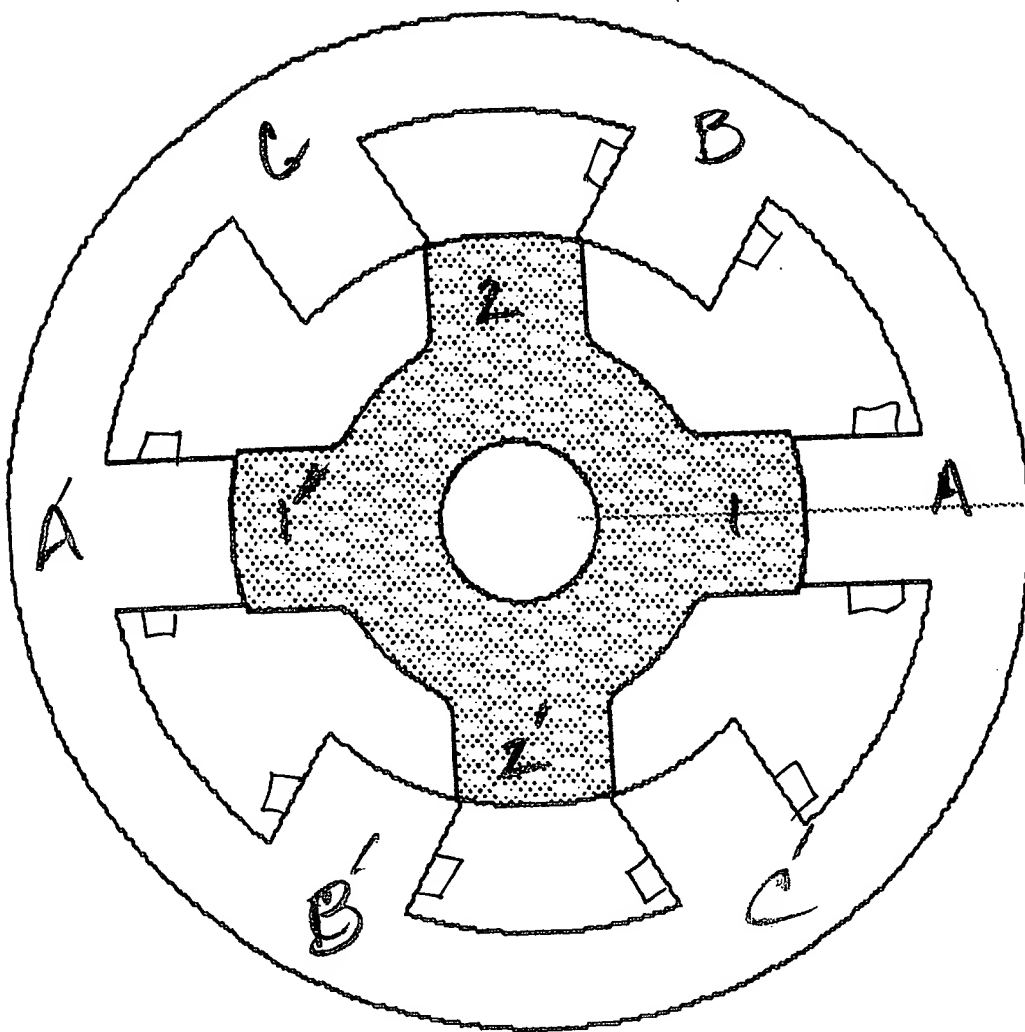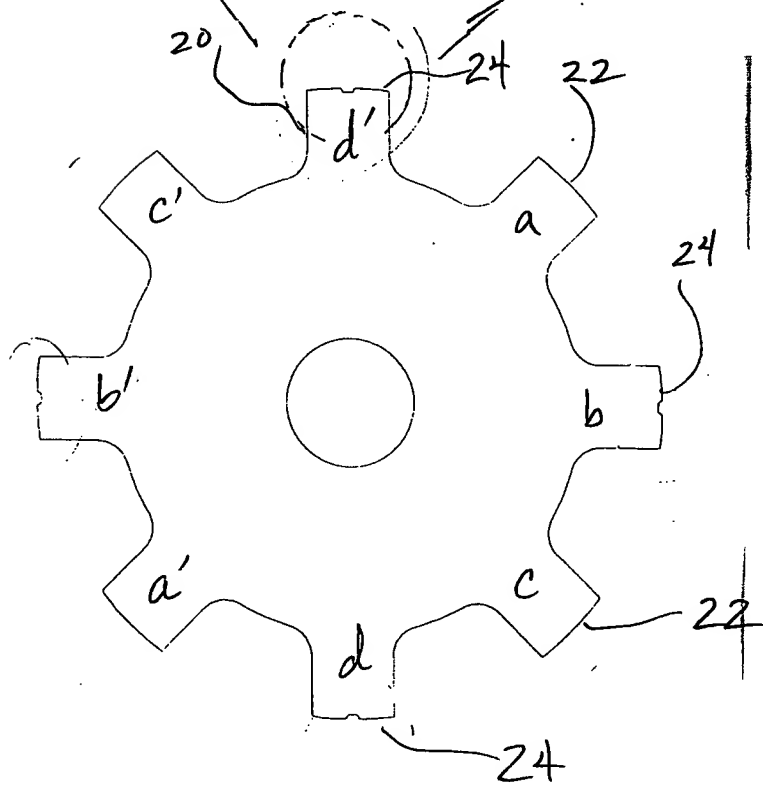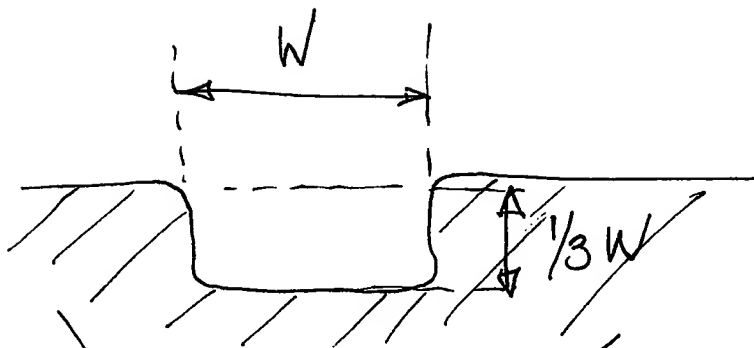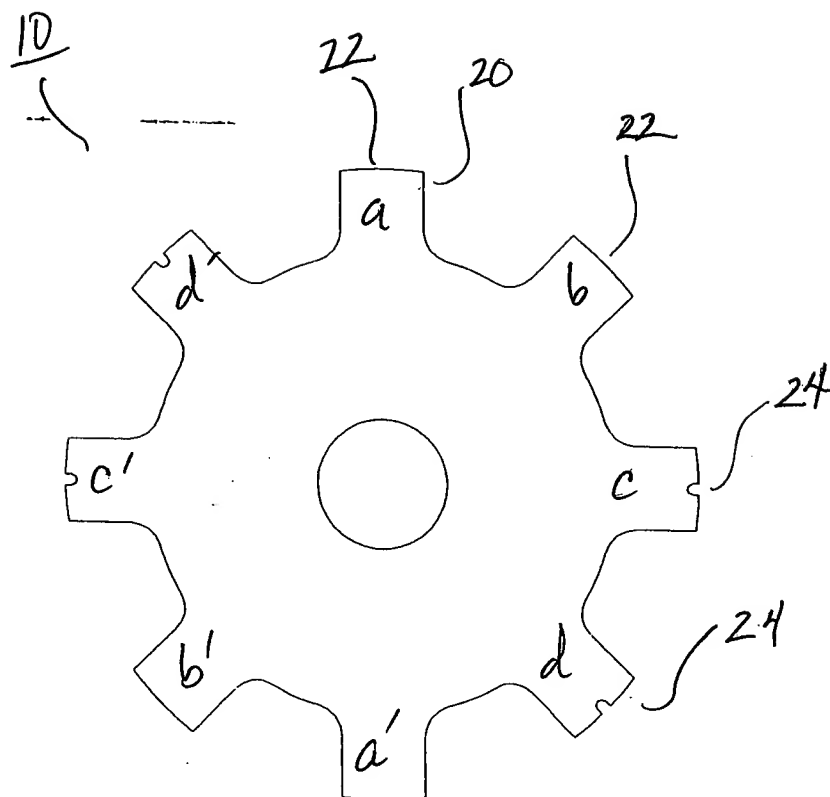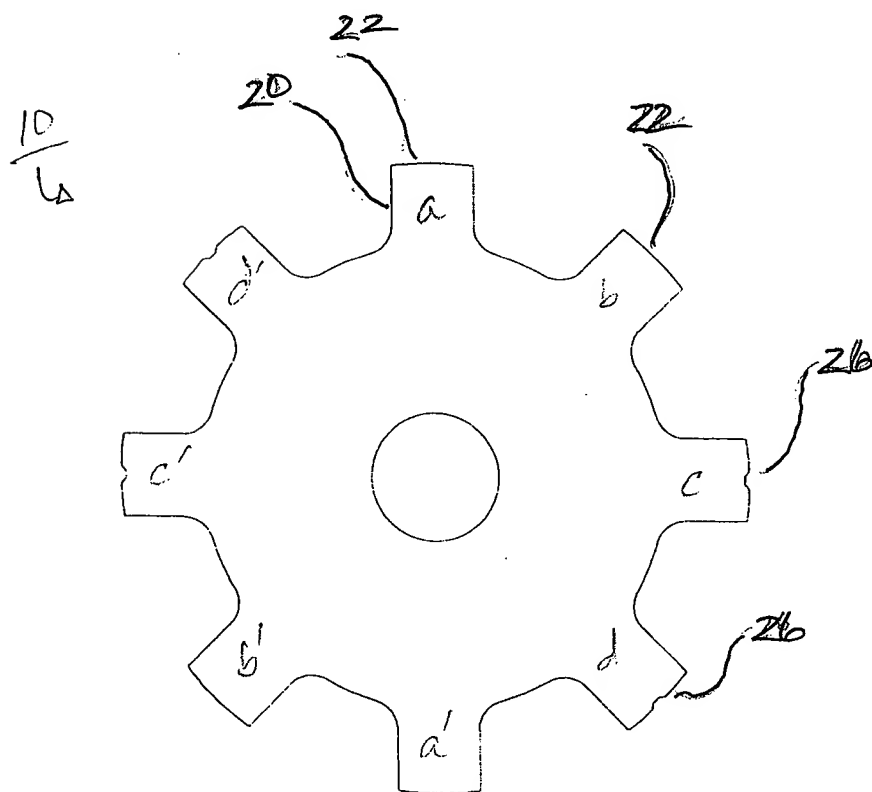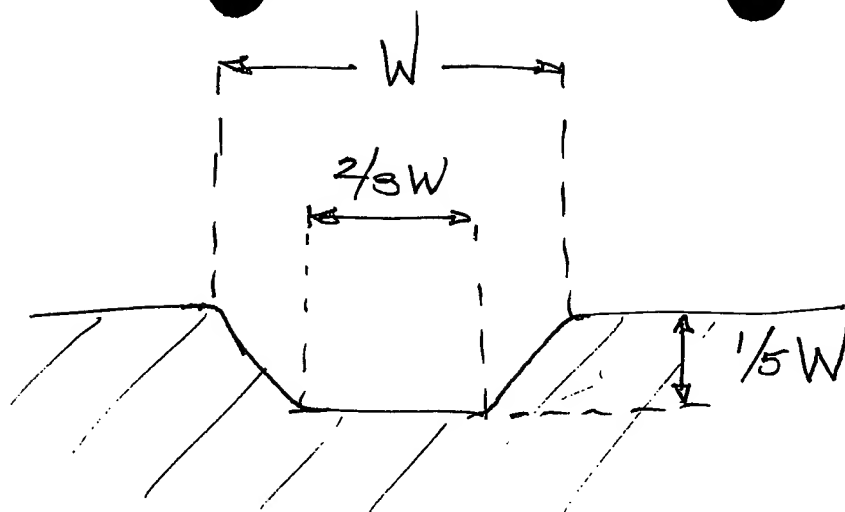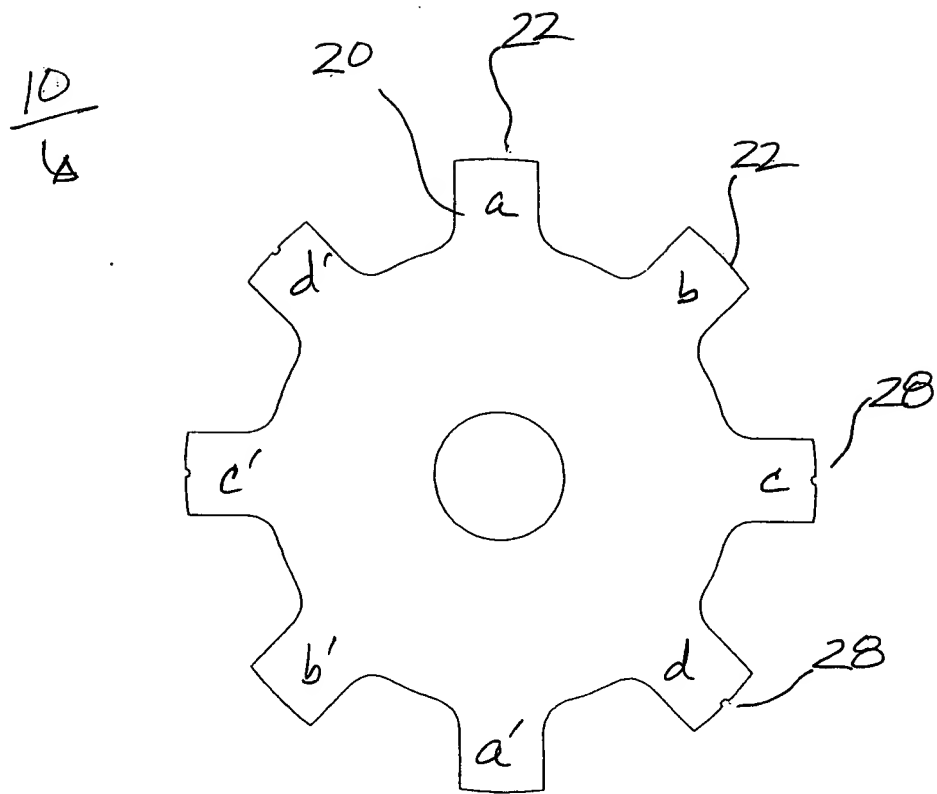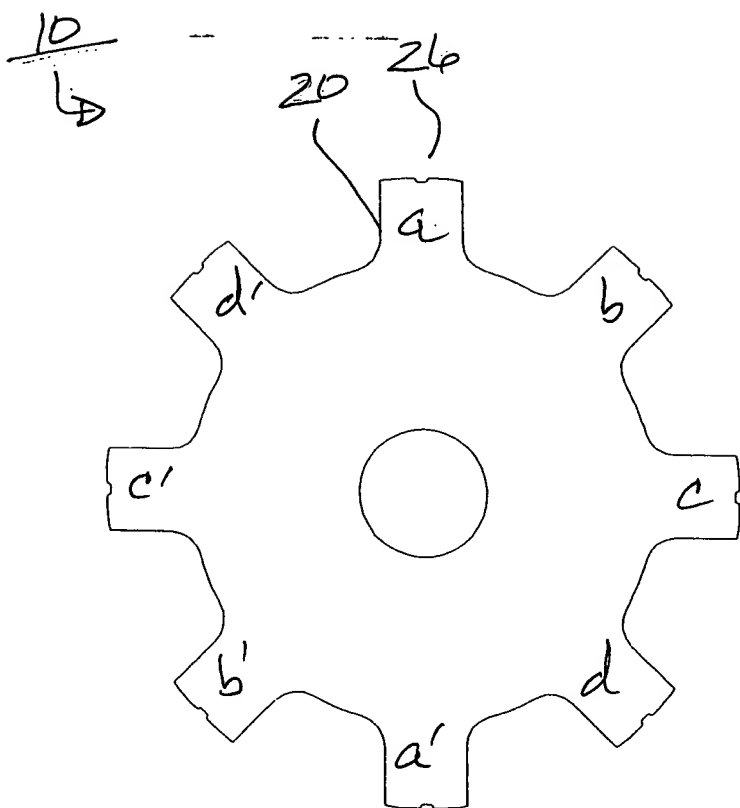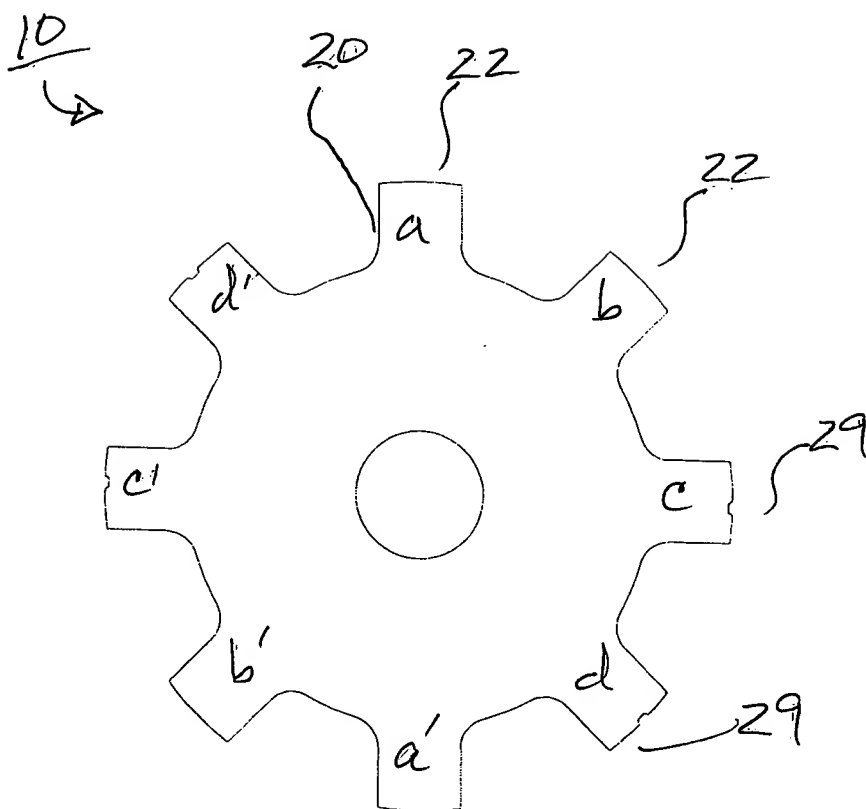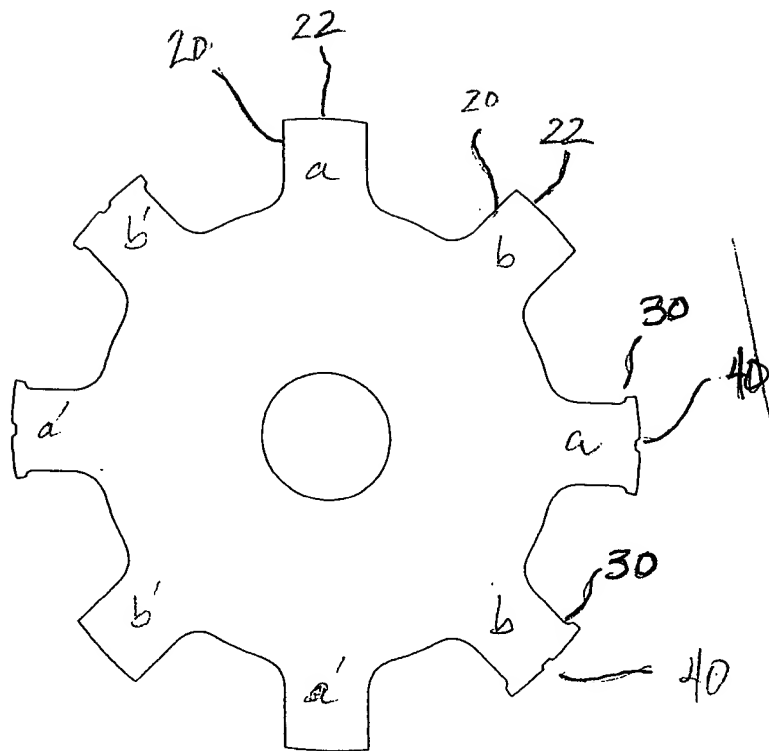
Standard Pole —

Shallow notch / Standard Pole – –

wide pole with notch –o–o–

wide pole without notch –+–+–

1
2
3
4

Normal Force

FIG. 23B

Legend:
- Standard
- Wide-narrow plus Notched

Y-axis: Sound Pressure Level (dB) — 35, 40, 45, 50, 55, 60

X-axis: Frequency (Hz) — 1, 2, 3

FIG. 23C

1 ------- Notched Wide Poles with Narrow Poles as in FIG. 21G

2 ———— Standard Pole Configuration

3 ———— CIM

Frequency (Hz)

Sound Pressure Level (dB)

FIG. 24

FIG. 25

FIG. 26